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ABSTRACT

Encompassing materials from 1968 to 1976, this annotated bibliography includes articles in both English and French. The topics covered are: (1) teacher workload in elementary, secondary, and post-secondary institutions; (2) teacher assignment, distribution, and supervisory and extracurricular duties; (3) class size and student-teacher ratio; (4) hours of work; and (5) sources of stress and teacher morale. The document is directed primarily toward administrators and those concerned with the problems involved with staff utilization in education. (DS)

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TEACHER WORKLOAD

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110 ARGYLE AVE., OTTAWA, ONTARIO. K2P 1B4

TEACHER WORKLOAD

This bibliography lists materials published on teacher workload since the first bibliography (Bibliography No. 20) was published on this subject in 1971. Entries listed have been subdivided by topic and annotated wherever possible.

Sources consulted in preparing this bibliography include the British Education Index (The Library Association), the Canadian Education Index (CEA), the Current Index to Journals in Education (CCM), the Directory of Education Studies in Canada (CEA), Resources in Education (ERIC) and Subject Guide to Canadian Books in Print (University of Toronto).

Material held in the CTF Library is marked with a single asterisk. The Library also purchases microfiche copies of documents marked with a double asterisk.

This bibliography was prepared by Mrs. Marita Moll in the George G. Croskery Memorial Library.

Geraldine Channon,
Director,
Research and Information
Services.

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A. Teacher Workload - General

1. Elementary and Secondary Schools

*1. Alberta teachers pulling more than their load. ATA News 8:1 Nov 15'73.

Results of a 3-year survey show that Alberta teachers are undertaking extra educational loads to maintain and make some improvements in the quality of educational services. The survey was conducted to assess the effects on education of various factors such as financial restrictions imposed on school boards in 1970.

*2. Bodell, Karl. The working conditions of teachers in Organization for Economic Co-operation and Development. New patterns of teacher education and tasks; country experience: Sweden. Paris: OECD, 1974. 168 p. (p. 80-100.)

Report of a detailed study on teacher workload in Sweden.

3. Bushe, S. Donald. Differential Use of Staff Time Through the Use of Teacher Produced Video-Taped Lessons. Edmonton: Edmonton Public School Board, 1971. 8 p.

*4. Canadian Teachers' Federation. Teacher Workload. Bibliographies in Education No. 20. Ottawa: CTF, 1971. Available ERIC. ED 054 060.

This 467-item bibliography contains citations of books, published and unpublished papers, and journal articles, ranging in date from 1954 to 1970. It is divided into five sections: 1) general, 2) assignment and distribution, 3) class size and pupil-teacher ratio, 4) hours of work, and 5) morale. Availability from ERIC and the Canadian Teachers' Federation Library is noted where applicable.

5. Centrale de l'enseignement du Québec. La tâche: une lutte à mener contre l'arbitraire patronal. Québec: CEQ, 1974. 21 p.

6. Charbonneau, Y. Quotidiennement ... chaque jour. Québec: Corporation des enseignants du Québec, juin'72. 52 p.

*7. Class size, workload subjects of TLC study. Sask Bul 41:1 My 2'75.

Explanation of a questionnaire designed to gather accurate data on class size, scope of teaching assignments and extra-curricular workload of teachers. Information gathered should make possible a careful study of existing conditions in each school system and the province as a whole and provide a basis for continuing assessment of working conditions.

*8. Conféderation mondiale des organisations de la profession enseignante. Conditions de travail pour au enseignement de qualité. Rapport du stage d'études de la CMOPE, Kenya, 10-14 août, 1973. Morges: WCOTP, 1973. 93 p.

Un rapport sur les conditions de travail pour un enseignement de qualité dans 33 pays. Contient les résultats d'un enquête relatif aux salaires, benefices margénaux, le rôle des enseignants dans la planification et évolution de l'éducation, des programmes scolaires, du nombre d'élèves par classe, etc.

9. Cuban, L. Teaching the children: does the system help or hinder? Assn Sup & Curric Develop Yrbk 1971:147-60.

10. Dupont, Côme. Encadrement des élèves, la tâche des enseignants et la négotiation locale. R Information 16:4:8-11 déc'76.

*11. Enns, John, Frank Dillon and Stirling McDowell. Implications of the employment of auxiliary school personnel. Ottawa: Canadian Teachers' Federation, 1974. 72 p.

The three papers discuss the employment of teacher aides in terms of the professional, preparation and economic implications.

*12. Enns, G. Quality education demands freedom from harassment, interference and ignorance. Man Teach 51:5 Je'73.

If the quality of education is to improve, teachers must be given more time to be human with their pupils. The number of subjects, the number of classes and the number of students taught will have to be accepted as significant variables in teacher workloads.

*13. Elementary school teachers are entitled to better conditions. Man Teach 54:9 Mr'76.

Identifies problems in the workload of elementary teachers and indicates benefits to be derived from decreasing that workload.

*14. Fisher, B., and C. Rosenberg. Two letters on tactics. Community Sch 4:4-5 Mr'74.

The author reviews the major events in the history of the labour movement which led to shorter working hours and encourages teachers to identify their situation with the struggles of the labour movement. Teachers' federations are accused of lack of response to teachers' demands on workload issues at contract time.

*15. Groves, C. Graying of the teaching profession. ATA Mag 55:8-12 Nov-Dec'74.

Innovative practices in the classroom are being introduced without due consideration for the time and energy required for their implementation. The author calls upon teacher organizations to mount an immediate investigation into the increasing load placed upon teachers by the yearly output of recommended innovative practices.

16. Hanson, Derek. The strain of front line service. Times (London) Educ Sup 2954:4 Dec 31'71.

Does less class time lead to improved teaching? Author says yes, and suggests several ways in which the classroom teacher's burden could be eased.

17. Horton, John H. A comparison of secondary and elementary teachers' attitudes toward selected environmental conditions in the schools of Yarmouth Town and County, Nova Scotia. M.Ed. thesis, Acadia University, May 1975. 97 p.

A study which compared groups of classroom teachers to determine if there were significant differences in their attitudes toward their school working environments, specifically in the areas of working conditions, professional environment, social relationships and rapport.

18. How can English teachers be more effective. (A brief from the English Work Load Committee to the Saskatoon Public Board of Education, October, 1976) Skylark 13:2:10-13 Wtr'76.

*19. Hyer, A.L. and R.M. McClure. New patterns of teacher tasks and their implications in Organisation for Economic Co-operation and Development. New patterns of teacher education and tasks -- general analyses. Paris: OECD, 1974. 118 p.(p. 50-86.)

This paper is divided into three sections. The first focuses on one of the major aspects of the changing context of teaching -- the trends in the distribution of responsibilities for teaching and learning. The second section is mainly devoted to discussing the types of environment most likely to favour the active and effective participation of teachers in educational innovation. The final section deals with possible ways in which the teacher could perform his new tasks -- flexibility in staffing patterns and regulations, changes in working conditions and new approaches to class size and quality of education.

*20. Jampolsky, M. Cheap education: poor bargain at any price. ATA Mag 53:38 Mr-Apr'73.

Schools have taken on massive responsibilities which are placing unprecedented demands on a teacher's time and ingenuity. One result of this trend is that teacher's expectations have shifted in such a way that working conditions are now considered as important or more important than salary. Some solutions to the problems imposed by time are presented.

21. Johnson, Bruce Kilgour. An investigation of teachers' salary and working conditions in selected school jurisdictions in Alberta, 1960-1969. Ph.D. thesis, University of Alberta, 1971. 317 p.

22. Kowalski, Al. Teacher Load, School Year 1970-71. Calgary Separate School Board, October, 1970. 10 p.

*23. Luedicke, Klaus Michael. A study of the workload of teachers in the central and regional high schools of Newfoundland. M.Ed. thesis, Memorial University, 1974. 245 p.

Provides extensive review of previous research on teacher workload. Provides data on the dimensions of teacher workload in a sample of Newfoundland high schools.

24. Morland, S.P. Jr. Educators rather than technicians. Vital Speeches of the Day 39:624-26 Aug 1'73.

Educational reforms must emphasize new approaches to teaching methodology, teacher efficiency, and the circumstances under which teachers perform their duties.

**25. National Council of Teachers of English. Workload for English teachers: policy and procedure. A report by the Ad Hoc Committee on English Teacher Workload in Secondary Schools. Urbana: 1973. 36 p. Available ERIC. ED 079 748.

Discussed in some detail is the policy statement of the National Council of Teachers of English (NCTE) concerning the English teacher workload, which states (briefly) (1) in order to make it possible for English teachers in secondary schools to give an accountable performance, schools and their communities must recognize that maintaining class sizes and teacher workload at desirable levels is a vital part of the community's accountability to its teachers and its youth; (2) the teacher of English should have direct instructional responsibility for no more than 100 students; (3) a ratio

for English teacher workload in a given school must be determined by discussions among local teachers, administrators, and laymen following a detailed analysis of local conditions; and (4) after determining desirable workloads for English teachers, schools should set specific target dates for progress toward attainment of desirable loads.

*26. Ontario Teachers' Federation. Teachers' Working Conditions Committee. Working paper on learning conditions. Toronto: Ontario Teachers' Federation, 1972. 96 p.

Replies to a questionnaire on all aspects of learning conditions sent to various teachers across the province are presented in tabular form. Questionnaire included.

27. Ottenheimer, G.R. Teacher allocation to school boards; ministerial statement delivered to the House of Assembly, 13 February, 1974. Sch World 22:31-3 Ja-Feb'74.

*28. Quality threatened. Manitoba Teachers' Society. Man Teach 53:1 Nov'74.

In a brief presented to Provincial Government officials, the Manitoba Teachers' Society outlines the major concerns of Manitoba teachers. In the area of quality education these include: the government's authorization of new directions or programs without provisions to implement them, lack of clear lines of authority and responsibility within the Department of Education which makes it difficult to obtain information or statements of departmental directions, numerous unrelated projects and studies that lack both goals and direction undertaken by the Department's research and planning branch and problems caused by the decline in student population, especially in rural areas.

*29. Québec. Ministère de l'éducation. Commission d'étude de la tâche des enseignants de l'élémentaire et du secondaire. Rapport de la C.E.T.E.E.S. mars'75. 5 v.

Reports the findings of a comprehensive study of teacher workload and working conditions in Quebec. The report makes a number of specific suggestions for appropriate staffing of Quebec schools.

30. Reineke, Robert, and Wayne Welch. Adequacy of science teaching conditions as perceived by administrators and teachers. Science Education 59:229-233 Apr-Je'75.

Compares principals' and teachers' perception of teaching conditions with the more positive views being possessed by principals. Information related to relative adequacy of conditions described by five scales: effectiveness, curriculum, load, facilities and support is presented.

31. Rife, Robert V. Would you believe? Engl Jrnl 61:4:555-559, 599 Apr'72.

Author describes how, without hiring additional teachers, the teaching load was lowered and the language arts curriculum was completely changed.

32. Ruebel, Marion Albert. Utilization of teacher time in the secondary schools of Iowa. Ph.D. thesis, Iowa State University, 1969. DA 2308-A.

33. Slabaugh, W.H. Provocative opinion: released time for teaching. J of Chemical Ed 48:435-7 Jy'71.

**34. Snyder, Carey. Why not differentiated staffing? Philadephia: National School Boards Association, 1971. 20 p. Available ERIC. ED 055 334.

Advocates of differentiated staffing suggest that teaching duties could be categorized to allow for different interests, abilities, and ambitions. Differentiated staffing, the ultimate outgrowth of innovations such as team teaching, nongraded programs, teacher aides, and open space planning, utilizes teachers to the maximum. Because it eliminates the burden of subprofessional work and bases the salary schedule on the degree of responsibility, differentiated staffing promotes professional development and increases the responsbility and expertise of teachers.

*35. Teacher satisfaction survey ... look and learn. Sask Bul 42:4 Oct 31'75.

Only 38% of the teachers responding to the 1975 teacher satisfaction survey reported satisfaction with the provision of time for preparation and evaluation during school hours in their particular jurisdiction. The annual survey represents individual teacher feelings on a wide range of matters affecting working conditions. Teachers and association locals are advised to study the results carefully.

*36. Thurgood, L. Over to you. Ed Courier 43:8-10 Apr'73.

A Windsor teacher explains the teachers' stand on unresolved workload issues which led to the mass resignations in November, 1972.

*37. Timmermans, Brian D.A. Teachers, time and teaching, or can the special employment plan work for us? Ed'l Courier 42:4-6 Apr'72.

Discusses the dimensions of the teacher's workload and indicates the place of lay assistants in relieving workload problems.

*38. World Confederation of Organizations of the Teaching Profession. Conditions of work for quality teaching. Report of a WCOTP Seminar, Kenya, August 10-14, 1973. Morges: WCOTP, 1973. 93 p.

A report on the conditions of work for quality teaching in 33 countries. Contains results of a survey dealing with salaries, fringe benefits, teacher influence on decision-making in education and on curriculum development, standards of preparation for teaching, the organization and administration of education, size of classes, etc. Complete report on the survey prepared by the Canadian Teachers' Federation as well as conference proceedings included.

*39. Wormbecker, John. Enter the volunteer: part time partners in the school. Ed Canada 10:37-9 Dec'70.

Organized, planned use of volunteers can produce a significant reduction in individual teacher workloads.

2. Post-Secondary Institutions

40. Adams, Walter H. Faculty load. Improving College and University Teaching 24:4:215-6,8 Aut'76.

A review of the literature dealing with faculty load in colleges and universities from 1929 reveals that this problem has not been resolved satisfactorily in any institution. Two plans are described for determining assignment loads.

41. Alworth, Robert M. and Dorothy Reich. A comparison of district and statewide faculty loads, Fall 1973 - Fall 1974. Los Angeles: L.A. Community College District, 1975. 54 p. Available ERIC. ED 114 135.

42. Alworth, Robert M. and Irving Weiser. A comparison of district and statewide faculty loads, Fall 1972 - Fall 1975. Los Angeles: L.A. Community College District, 1976. 90 p. Available ERIC. ED 132 987.

This publication provides data on day-program full-time faculty teaching loads in the Los Angeles community colleges for the fall semesters 1972 through 1975, compared to total statewide averages, and statewide small college and large college averages, by instructional descipline. Faculty load is computed by dividing weekly student contact hours per discipline by full-time equivalent faculty assigned to that discipline.

43. Archer, J. Andrew. Quantifying faculty workloads. Roanoke: Virginia Western Community College, Office of Institutional Research, 1974. 18 p. Available ERIC. ED 103 078

Teaching load depends on many variables, however most colleges define it strictly in terms of contact or credit hours. The failure to give weight to variables such as number of preparations, number of students served, committee and other noninstructional assignments is usually due to the lack of a formula that will quantify the effects of these variables. Virginia Western Community College has developed two formulas for quantifying faculty workloads. The guidelines and formulas for both models are presented, and a comparison of the formulas is conducted using actual samples of faculty workloads.

44. Barrett, Clyde Junior. The Influence of High School Senior English Teachers and the Senior Courses in High School English on Students' Performance in Freshman Composition at the University of Arkansas. Ann Arbor: University Microfilms, 1970. 154 p. ED 048 267. Not available ERIC.

The major objective of this study was to determine the effect on academic performance of the 12th year English background of students in college freshman composition. Student survey forms were given to 415 students enrolled in their first college English course in order to assess their past writing experiences, and questionnaires were sent to their 12th grade English teachers to determine the amount of academic preparation and workload of each teacher. Conclusions from the survey and questionnaire indicated the (1) students taught by more highly qualified teachers had a higher grade-point average in college English than those taught by less qualified teachers, (2) students taught by teachers with favorable work-loads had a higher grade-point than those taught by teachers with less favorable workloads and (3) students who had had regular practice in writing in high school did better than students with little writing experience, although practice in revising themes did not seem to improve grade-point averages.

45. Blackburn, Robert T. The meaning of work in academia. New Directions for Institutional Research 1:2:75-100 Sum'74.

Argues that institutional research efforts to ascertain faculty workload will continue to fail because of basic methodological and conceptual fallacies.

46. Breivik, Patricia Senn. Beyond full-time faculties. Libr J 96:1197-9 Apr'71.

47. Brown, Barbara and Richard Romoser. Full-time instructional load policies in selected community-junior colleges. Cleveland: Cuyahoga Community College, 1976. 13 p. Available ERIC. ED 121 367.

Instructional workload policies in community colleges around the country were investigated in order to determine whether changes have been occurring over the past few years and to compare the policy of Cuyahoga Community College with those of similar institutions.

Of the 16 institutions that provided comparative data for both 1973 and 1975, only one reported a decrease in workload policy during that time and none reported an increase. No significant differences were found between the policies of the union and nonunion groups of institutions. Survey responses are presented in tables by institution, and the questionnaire is included.

48. Career staffing center; American association of junior colleges. Jun Col J 42:3 Nov'71.

49. Carter, Charles F. Measuring faculty work in British universities. New Directions for Institutional Research 1:2:65-74 Sum'74.

British universities are following some American techniques and devising their own for measuring faculty workload.

50. Colorado State University. Office of University Planning and Budgets. Comparative staffing units as a measure of university instructional workload. Fort Collins: 1975. 72 p. Available ERIC. ED 139 367.

A project was undertaken to devise an improved method for determining the workload generated by each direct instructional, instructional-related, and professional-related activity carried out at Colorado State University and the estimated workload expected of each instructional faculty member. These load factors specifically recognize the input necessary to complete

each activity, and will be more accurate and meaningful than credit-hour loads, student-faculty ratios, or student credit-hour/full-time equivalent numbers. Use of this procedure could allow more equitable assignment of individual teaching loads, more equitable allocation of faculty positions to colleges and departments, more justification for requesting additional teaching faculty positions, and possibly a better means of communicating to the public the vast range of activities in which university instructional faculty are involved.

**51. Cornish, D.J. Faculty workloads -- a critical examination. Edmonton: Alberta Colleges Commission, 1972. 81 p. Available ERIC. ED 067 065.

There were 2 major objectives to be achieved in this paper on faculty workload: (1) to provide some overview of actual workload conditions in 2-year colleges in selected areas of North America with specific focus on Alberta, Canada; and (2) to devise a system for analyzing the implementation of faculty load levels through legislation, policy, or guidelines so as to be consistent with the philosophical orientation of the Alberta Colleges Commission. To this end, this document presents (1) a review of the literature pertaining to faculty workload; (2) a review of faculty workload procedures and events in the province of Alberta; and (3) an analysis of alternative sources of authority to determine workloads.

52. Cuyahoga Community College. Faculty compensation report, 1973-1974. Cleveland, Ohio: 1974. 25 p. Available ERIC. ED 088 553.

The results of a survey made of faculty compensation and instructional load policy in junior colleges are presented. Institutions were asked to report the number of full-time faculty, their average 1973-1974 full-time salary, fringe benefits and total compensation amounts, their definition of a full-time instructional load in terms of credit hours and clock hours per week, and their means of remunerating part-time faculty.

53. Cvancara, Joseph G. and Robert Gallagher. A study to determine an acceptable teaching load in vocational agriculture. Jrnl of the Amer. Assoc. of Tchr. Educators in Agriculture 17:2:1-6 Jy'76.

The report of a study conducted in Washington State is comprised largely of questionnaire-collected data showing that Washington Vo-Ag teachers for the most part have too many students to supervise all aspects of their programs effectively. Supervised agricultural experience programs and FFA were most often cited as most neglected.

54. DePaoli, John A., Jr. A comparison of working conditions between community college instructors in collective bargaining contract colleges and traditional colleges. Ph.D. thesis, United States International University, 1974. 123 p. Not available ERIC.

Results of a questionnaire indicate that mean maximum salaries in collective bargaining colleges are 21 percent higher, but that there is only a three percent difference in mean minimum salaries. There were no significant differences in working conditions (contract hours, overload teaching assignments, office hours, class size, committee responsibilities, classroom substitution, community activities, and budget development), leave provisions, promotion and tenure provisions, or general contract provisions (holidays, instructional travel, affirmative action clauses, non-strike pledges, and board freedom to alter the work force).

55. Duerr, Bradley, and Robert Bell. Faculty utilization by the community colleges; a report to the Washington State Legislature. Olympia: Washington State Legislature, 1977. 50 p. Available ERIC. ED 144 656.

To determine if the faculty of the Washington State Community College System were being efficiently and effectively utilized, a Legislative Budget Committee auditor selected six community colleges for a detailed review. Data selected for review were (1) individual faculty teaching loads and (2) course offerings.

The report sets forth the qualifications for personnel, the tenure policy, and average base salaries by district and college; describes the system-level planning and review functions as they relate to utilization of faculty; and makes recommendations for improving the System's planning and review process. It also recommends that the legislature continue to include in the appropriation bill a proviso that limits the number of FTE faculty that can be employed within the System.

56. Feinblatt, Joseph G. A comparison of district and statewide instructor loads -- Fall, 1973. Los Angeles: L.A. Community College District, 1974. 30 p. Available ERIC. ED 099 011.

This publication provides data on day faculty loads in the Los Angeles Community College District for fall 1973.

The district and college loads for each major discipline are compared with the statewide average loads, and those disciplines which differ significantly from the statewide pattern in terms of their standard percent deviations are isolated for discussion.

57. Fitzgerald, James S. A way out of the faculty load muddle. Community and Junior College Jrnl 45:8:30-31 My'75.

To arrive at an equitable teaching load policy, the percentage of load allotted to each course should be identified. In addition, a table of appropriate basic class sizes should be designed so that unusual class sizes can be quantified and calculated into the percentage of load assigned for each course.

58. Gallagher, Robert E. A study to determine an acceptable teaching load in vocational agriculture. Final report for the period May 10, 1974 - June 30, 1975. Pullman: Washington State University, 1975. 73 p. Available ERIC. ED 117 424.

The document studies the problem of student overload in vocational agriculture programs in the State of Washington, examining its impact on teaching effectiveness and shop safety.

An analysis of the data concluded that: (1) not enough is known about the cooperative education program in vocational agriculture, (2) inadequate time for supervision is allowed for the majority of instructors, (3) majority of the programs need more instructors, (4) supervised farming projects and the Future Farmers of America are adversely affected by student overload, (5) 13 to 30 students should be able to be supervised in a cooperative education program, (6) an agriculture classroom should consist of 16-20 students, with shop classes between 14 and 16 students, and (7) 75-80 students is an acceptable teaching load.

59. Goeres, Ernest R. Compensation for overload and extra contractual services. Collective Bargaining Perspectives Vol. 2, no. 5. Morgantown: West Virginia University, Dept. of Educ. Psych., 1977. 5 p. Available ERIC. ED 140 711.

Most faculty collective bargaining agreements now require supplemental compensation for the performance of any duty that is in addition to what is defined as the normal teaching load for college faculty. Virtually all agreements state very clearly what a basic faculty load is, and all other services are thus defined or designated as overload or extra-contractual, whereas many of these duties are considered part of the normal teaching load at non-union institutions. In the agreements, not only are they clearly defined by function, but the rates of pay and faculty selection procedures are also clearly expressed. Also, many agreements now contain guarantees for summer school teaching assignments, which ensure that faculty receive summer salaries (total or part), even though classes may be cancelled because of low enrolments.

60. Gray, R.R. Trends in faculty-load weighting. JOHPER 41:38-9 Sept'70.

61. Guidelines for the workload of the college English teacher. College English 38:8:873-5 Apr'77.

62. Hawaii University. Faculty teaching load, community colleges, Fall 1976. Honolulu: 1976. 32 p. Available ERIC. ED 132 990

This report describes faculty teaching load for fall 1976 in the Hawaii community college system as measured in terms of average semester hours taught, average hours in contact with students, and class size. The data used in generating this report were based on students registered in regular credit programs in Hawaii community colleges. Average class size was smaller at most of the colleges. Faculty teaching figures indicated: a generally heavier workload in terms of average semester hours taught by instructors compared to 1975; a generally heavier workload in terms of weekly instructor contact hours compared to 1974; a decline in productivity ratios for the system compared to 1975; and an unchanged faculty/student ratio of 1:23 for the system. Decline in productivity ratios and average class size are attributed to lighter credit loads carried by both full- and part-time students and the greater proportion of part-time students.

63. Hesseldenz, Jon S., and Samuel A. Rodgers. An analysis of predictors of instruction work effort. Research in Higher Educ. 4:3:219-34, 1976.

An investigation of how well the predictor variables of credit hours, student credit hours, contact hours, student contact hours, level of instruction, and academic rank correlate with faculty self-report measures of time-use for each class taught showed that only contact hours were a reliable measure of faculty effort as measured in time for a class.

64. Huther, John W. Faculty workloads in the state capital. New Directions for Institutional Research 1:2:35-48 Sum'74.

A survey of state government action regarding faculty workload and utilization shows the extent of legislative and executive department concern.

65. Jedamus, Paul. Teaching loads over time. New Directions for Institutional Research 1:2:17-34 Sum'74.

Longitudinal data from seven institutions demonstrate the utility of comparative trend analysis of teaching loads.

66. Laughlin, J. Stanley, and Vernon A. Lestrud. Faculty load and faculty activity analysis: who considers the individual faculty member. Paper presented at the Annual Forum of the Association for Institutional Research. Los Angeles: 1976. 15 p. Available ERIC. ED 126 847.

Increased pressures continue on faculty in higher education as expressed by faculty workload and faculty activity analysis. Often those who collect and utilize such data do not consider the outcomes of decisions from the faculty viewpoint. Examined are how the uses of certain faculty load data and faculty activity analysis data place pressures and conflicts upon faculty members. The faculty member's consideration should be a variable in decisionmaking.

67. Lawson, Donald F. Summary of the Spring Quarter 1971: faculty time use study at Humboldt State College. Arcata, Calif.: Humboldt State College, 1971. 10 p. Available ERIC. ED 057 749.

Due to public misunderstanding of the unit-load measurement versus the hours per week standard of work measurement, a study was conducted at Humboldt State College to determine the average number of hours a full-time instructional faculty member spends in performing his job. Faculty activity data was collected by means of a daily-diary form of questionnaire during a 1-week survey period. Findings show that faculty members at Humboldt not only carry over the budgetary norm of 12 weighted teaching units,

but they also spend an average of 57.1 hours per week in fulfilling their duties.

68. Lombardi, John. Faculty workload. Topical paper no. 46. Los Angeles: California Univ., ERIC Clearinghouse for Junior College Information, 1974. 25 p. Available ERIC. ED 097 925.

Various aspects of faculty workload are reviewed, with emphasis on definitions of workload and on major problems in developing workload formulas. Attention is also given to the erosion of parietal policies, the quality versus quantity issue, and the effect of collective bargaining on workloads.

69. Maryland Council for Higher Education. Faculty activity survey. Annapolis: 1975. 46 p. Available ERIC. ED 119 591.

Some findings were: (1) faculty members in Maryland's institutions for higher education reported workloads similar to those reported by faculty members in other states; (2) the percentages of time devoted to different activities vary according to institutional missions; (3) total workloads of the University faculty members appear to be within the recommended guidelines of the American Association of University Professors; (4) nearly constant amounts of time were spent in preparation and administration per credit hour regardless of course levels: (5) number of student credit hours per full-time equivalent faculty member varied greatly by segment, by level of instruction, and by field of knowledge; and (6) by enabling each institution to compare its own data with statewide averages, efficiency or inefficiency may be recognized.

70. Miller, R.L. Prescribing faculty workloads. Cur Issues Higher Ed 26:202-9 '71.

71. Mortimer, Kenneth P., and G. Gregory Lozier. Faculty workload and collective bargaining. New Directions for Institutional Research 1:2:49-64 Sum'74.

Workload clauses in 92 collective bargaining contracts provide one basis for predicting future trends and tradeoffs.

72. Nelson, Hershel H. Academic planning in the physical education department of Polk Community College. Ph.D. Practicum, Nova University, 1974. 26 p. Available ERIC. ED 099 092.

This study illustrates an attempt to quantitatively express justification for altering the workloads and compensation for members of the physical education

department of Polk Community College (Florida). While equitable workloads can be determined in most other fields because credit hours coincide with an instructor's time in class, the physical education staff often spends more than twice the number of hours in class than credit hours reflect.

73. Parsons, Gary L. An assessment of the impact of implementing innovative teaching methods on teaching loads at Golden West College. Ph.D. thesis, Nova University, 1976. 153 p. Available ERIC. ED 144 633.

This study examines the faculty workload policy of a community college that makes extensive use of non-traditional, innovative teaching methods. Workloads of 163 full-time day faculty in eight instructional divisions were analyzed for 1974-75 and compared with a reference "standard load" (SL). It was found that: (1) instructional hours per week averaged 16.9, or 12.6% more than the 15 hour SL; (2) preparations per week averaged 4.51, or 8.8% fewer than the five SL preparations; (3) WSCH*averaged 545.83, or 9.17% more than the 500 WSCH of the SL; (4) outside assignments per week averaged 6.29 hours, or 25.8% more than the five hour SL; (5) paraprofessionals provided 11.71% of a standard teaching load, equivalent to a total workload of 19.46 full-time teachers; and (6) total teacher load averaged 93.94%, or 6.1% less than the 100% standard load. It was also found that the present workload policy provided fair work assignment for 77.9% of the faculty, but that workload among divisions ranged from 86.23% to 114.29%, indicating a need for reexamining that policy.

*WSCH -- weekly student contact hours.

74. Segalla, Angelo. Implications of the Presidents' Study for Golden West College. Huntington Beach, Calif.: Golden West College, 1975. 62 p. Available ERIC. ED 115 353.

Since 1968, an increasing number of California community colleges have participated in the Presidents' Study, a study of Weekly Student Contact Hours (WSCH) and Full-Time Equivalent Faculty (FTE) to determine faculty work loads, cost factors, and trends.

The methodology of the Presidents' Study is criticized for its oversimplified equation of faculty load with WSCH, a measurement less meaningful for institutions committed to non-traditional programs and methods.

75. Shaw, Frances Fergusson. Analysis of California Community College District Policies of Faculty Teaching Load. M.A. thesis, California State University, 1975. 61 p. Available ERIC. ED 118 170.

On the basis of the review of the literature and an analysis of the survey results, a number of conclusions are drawn, and two recommendations are made: (1) State agencies and academic departments should establish and maintain realistic proposals of expected teaching loads; (2) Continuous assessment should be done regarding correlation of faculty teaching loads in each discipline. Survey results are tabulated in the body of the paper, and the survey instrument and list of respondents are appended.

76. Shay, John E. Coming to grips with faculty workload. Educ Rec 55:1:52-58 Wtr'74.

77. Sheets, N.L. Guidelines for assigning college faculty loads. JOHPER 41:40-3 Sept'70.

78. Staller, Jerome M. Collective bargaining: its effect on faculty at two-year public colleges. Paper presented at the Annual Conference on Collective Bargaining in Higher Education. New York: 1975. 15 p. Available ERIC. ED 125 694.

Using 1970-71 data for 263 community colleges throughout the United States, the author conducted a study designed to examine the impact of unionization and collective bargaining on the compensation and workloads of community college faculty members. This paper discusses the methodology used and presents two mathematical models for determining the level of faculty compensation, and for determining faculty workload.

While unionization did not have a significant effect on salaries, it did significantly reduce teaching load. These results suggest that in the initial years of bargaining the faculty have been willing to trade off potential salary gains for increased welfare and better working conditions. In the future, it is expected that these results will change as bargaining matures and certain concerns become less paramount.

79. Staller, Jerome M. The impact of collective bargaining on faculty at two-year colleges. Ph.D. thesis, Temple University, 1975. 171 p. ED 126 987. Not available ERIC.

This study examines the structure and scope of collective bargaining in community colleges and the impact of collective bargaining on faculty compensation and working conditions. Two hypotheses were tested: (1) Compensation of faculty at unionized community colleges has increased relative to compensation of faculty at non-union colleges. (2) The student-faculty ratio is lower at unionized community colleges relative to that at non-unionized schools.

It appears that, overall, unionization has had some success in improvement of fringe benefits and reduction of faculty workload in the community college. Research instruments and an extensive bibliography are appended.

80. Starr, S. Frederick. A fair measure for faculty workloads. Educ Rec 54:4:313-15 Feb'73.

Analyzes the success of a unit system, devised and implemented in the department of History at Princeton University, that recognizes the full complex of functions in allocating faculty time.

**81. Stecklein, John E. How to measure faculty work load. Washington: American Council on Education, 1961. 56 p. Available ERIC. ED 096 874.

This document investigates the measurement of faculty workload. Emphasis is placed on the uses and values of faculty workload studies, various methods of measuring faculty workload, including measures based on course inventories and faculty reports; recommended procedures for making a comprehensive faculty load analysis, and uses of faculty load data. Recommended procedures for making a comprehensive faculty load analysis include the formation of a faculty advisory committee; determination of guiding policies; development of report forms; content of faculty activities report; distribution and collection of forms; and tabulation, analysis, and reporting of results.

82. Stevens, Mary A. The effect of the new faculty workload system on the production of student credit hours by full-time faculty in one department at Black Hawk College (Illinois). Ed.D. Practicum, Nova University, 1976. 40 p. Available ERIC. ED 125 719.

Prior to fall 1974, faculty workload at Black Hawk College (Moline, Illinois) was determined on the

basis of total semester hours taught. Now it is based on the equitable teaching load, as agreed upon by the department chairman and the faculty member, subject to administrative approval. This new method of computation is based on departmental goals for production of student credit hours, and recognizes such factors as the number of preparations, the amount of time spent in course development, and the amount of time spent in committee work.

83. Stewart, Michael O. Faculty activity analysis: its role in the evaluation of faculty. 12 p. Available ERIC. ED 088 321.

The faculty activity analysis describes the time faculty spend in various professional activities. Faculty time is expressed in terms of hours or in terms of percent of the total work effort. Various forms of the analysis are discussed. Each form emphasizes categories of faculty time including: instruction, research, professional development, and internal service. The data derived from the analysis can be used to identify the faculty component of instructional costs; determine faculty activity patterns; and determine faculty course load patterns.

84 Stier, William F. An investigation and evaluation of faculty workloads, with specific emphasis upon the physical education departments of selected small liberal arts institutions of higher learning. Carbondale: Southern Illinois University, 1970. 29 p. Available ERIC. ED 049 681.

It is the thesis of this paper that many factors must be taken into consideration to determine faculty workloads and that the weights placed upon the various factors are of importance equal to the actual factors themselves. The first section reviews available literature on faculty workloads, and lists: (1) some of the questions asked in these investigations; (2) time spent by 75 faculty members at Southern Illinois University at 12 different activities related to their work; and (3) 19 factors that should be considered in determining faculty workload. The second section considers the purpose and results of a questionniare that was sent to directors of physical education departments at 15 small 4-year liberal arts colleges in the Mid-west. Ten responded to questions concerning: (1) policy regulating faculty workload; (2) factors involved in determining faculty workload; (3) compensation received for coaching responsibilities; (4) average hours of teaching load; (5) average time spent by department chairmen in various duties; (6) factors

considered a part of an individual physical education faculty member's total responsibility that are assumed in addition to regular teaching assignments, along with the compensation for these responsibilities.

85. Sutton, Lawrence S. A study to facilitate development of a faculty workload policy for Central Florida Community College. Ed.D. Practicum, Nova University, 1976. 68 p. Available ERIC. ED 136 844.

A study was conducted in order to determine appropriate components for a full-time faculty workload policy at Central Florida Community College (CFCC). A questionnaire was utilized in a survey of 27 CFCC faculty and the faculty workload policies of other states were reviewed through literature and telephone interviews. Results of the survey and tabulation of data from the other sources indicated that full-time faculty workloads averaged fifteen semester hours. In addition, it was found that the average sum of student contact hours and semester hours assigned to full-time CFCC faculty was approximately 33. Because student contact hours are a required portion of the instructor's responsibility and since the State of Florida mandates that a full-time instructional load consists of fifteen semester hours, recommendation was made that the faculty workload policy be quantified as the sum of semester and contact hours not to exceed 33. Additionally, it was recommended that workloads be continuously monitored in order that workloads which do not give instructors adequate preparation time be eliminated.

86. Texas City. College of the Mainland. Faculty load: a report to the Dean of instruction. Texas City: 1975. 94 p. ED 110 109. Not available ERIC.

This document contains the findings, conclusions, and recommendations of the special committee. Findings indicated little uniformity of policy. It was concluded that the question of teacher load is a local issue dealt with according to local conditions and typically under the administration and approval of the responsible dean. Results of the faculty questionniare indicated that COM faculty members were involved in varying amounts of non-teaching activities and that they carried extremely varying teaching loads.

**87. Trotter, Bernard and others. "The ten o'clock scholar?" What a professor does for his pay. Toronto: Council of Ontario Universities, 1972. 16 p. Available ERIC. ED 069 209

Many people protest that professors are overpaid for the amount of time that they spend in the actual classroom situation. However, what most people do not realize is that classroom time is not the only time that the professor must devote to his work activities. The typical package of professorial duties would necessarily include: (1) scheduled classes such as lectures, seminars, labs, and tutorials; (2) unscheduled tutorials, review sessions, etc.; (3) individual counselling related to specific courses; (4) graduate student thesis supervision; (5) research; (6) other study and scholarly work; (7) administration in one's own university, including services to students not related to specific courses, departmental adminstration, faculty administration, and university administration; (8) inter-university administration; and (9) service to the discipline (professional societies, etc.). These combined duties generally add up to 50 work-hours per week for the 9-month period between September and May, which averages out to a 12-month work-week of appreciably more than 40 hours.

88. University of Connecticut. The faculty work week at the University of Connecticut. 1976. 16 p. Available ERIC. ED 142 157.

A study of the faculty work week at the University of Connecticut shows that the typical professor works 54.8 hours per week. The study, conducted between April 9 and April 29, 1976, involved 213 faculty members. This represents 18 percent of the faculty, excluding librarians, full-time extension agents, and health center faculty, and provides a statistically reliable profile of faculty work activities. The faculty members kept detailed logs of their professional activities for seven consecutive days. During this week the participants recorded time devoted to four activity categories: teaching, research, service to the institution, and service to the general public. Analysis of the logs presented the distribution of time among the four areas.

89. Wendel, Frederick C. The fifteen hour week -- Parkinson's law at its best. Educ Planning 2:4:22-27 Je'73.

Develops a model for measuring faculty work load. Work load is divided into teaching, student advising,

service, and research. Applying the formula to institutions, the author found that distribution of workload was found to vary significantly within and among institutions, by department, and by rank, as well as for each of the four major areas mentioned.

90. Whatcom Community College. Faculty assignment classification system. Ferndale, Wash.: 1974. 6 p. Available ERIC. ED 099 094.

This document outlines the point-based faculty assignment classification system in effect at Whatcom Community College (Washington). The purpose of the point system is to provide an equitable and flexible means of compensating faculty members based on a system of assigning quantitative values to tasks. Teaching, which includes classroom instruction, preparation, student evaluation, professional growth, and informal contact with students, is used as the base activity for the point system. A value of one point is assigned to 10 contact hours before a group of students. The assumption is that two hours away from the group of students is required for each contact hour. Counselling and library work are equated to teaching, and a list of activities called "other contracted assignments" are also equated to teaching by assigning point values to them. Values for research, curriculum development, committee work, travel, conference attendance, peer evaluation, and other faculty duties are enumerated.

91. Williams, Robert L. The faculty work load -- alternate methods of evaluation. Denver: Education Commission of the States, 1970. 26 p. Available ERIC. ED 051 791.

This paper is primarily based upon an analysis of faculty workload at several midwestern universities. A faculty member's total workload consists of three different assignments: teaching, research, and public service. The average faculty member spends from 50 to 55 hours each week in these pursuits. The time spent in teaching is usually expressed in terms of contact hours and credit hours which, in turn, are controlled by three factors: (1) the class level of the student; (2) the accustomed or accepted methods of teaching; and (3) the nature of the subject matter. In addition, in assessing teaching loads it is also necessary to have information on:

(1) the number of contact hours per week taught in each school according to the academic trade of the faculty member; and (2) the teaching load based on the full-time equivalent faculty position. The teaching load of the research professor should be assessed on an individual basis. Other measures used in consideration of faculty workload discussed in this paper are: teacher-student ratio, class size, and student credit hours per full-time equivalent faculty.

92. Wing, Kenneth E. Comparative staffing units as a measure of university instructional workload. Ft. Collins: Colorado State Univ., 1975. 64 p. Available ERIC. ED 122 710.

Comparative staffing units quantify the direct instructional, related instructional, and related professional activities of university instructional faculty members. This method measures estimated faculty input, rather than output, and offers a number of advantages over the more traditional workload measures of credit hours, student credit hours, student credit hours per full-time equivalent, and student/faculty ratios.

93. Witmer, David R. Wisconsin state universities report on workload of teaching faculty, fall term 1970-71. Madison: Wisconsin board of Regents of State Universities, 1971. 16 p. Available ERIC. ED 059 675.

This report presents tables representing the total faculty teaching workload at the Wisconsin state universities during the academic year 1970-71. The average total weekly hours range from 56 hours for professors to an average of 41 hours for faculty assistants. When viewed within the context of the total faculty workload, the amount of time spent by faculty members in teaching activities constitutes the major portion of their total workload. The various categories to which time is allotted include: group instruction, individual instruction, preparation and associated activities, conferring with students about coursework, student advising, departmental research, budgeted research, student service, library, extension and public service, auxiliary enterprises, and other professional activities.

94. Wyant, June F. and Perry D. Morrison. A faculty workload survey. Jrnl of Educ for Librarianship 12:3:155-61 Wtr'72.

The purpose of this exploratory study was to survey the distribution of workloads of library school faculty members in the areas of teaching, research and study, and service. It was carried out in connection with a university-wide study conducted at the University of Oregon.

**95. Yuker, Harold E. Faculty workload: facts, myths and commentary. ERIC/Higher Education Report No. 6. Washington, D.C.: ERIC Clearinghouse on Higher Education, 1974. Available ERIC. ED 095 756.

This monograph examines methods by which faculty workload studies can be performed. It includes definitions and discussion of activities used in workload assessment, such as instructional time, institutional and public service, personal activities and research, scholarship and creative endeavors. The conclusion indicates that there is a paucity of empirical data about faculty workloads and too much acceptance of commonplace assumptions that do not stand up to critical examination. Faculty workload formulas will vary from institution to institution, and the individual institution should develop its own faculty workload questionnaires.

96. Yuker, Harold E. Studying faculty workload. Change 7:8:48-49,62 Oct'75.

Notes popular ideas about workload supported or challenged by recent research and recommends the use of standardized categories that define the components of workload, developed by a task force at the National Center for Higher Education Management Systems (NCHEMA), so that results of workload studies may be compared.

B. Assignment, Distribution, Supervisory and Extra Curricular Duties

1. DeHart, Florence E. "This course isn't your field, but...". Improving College and University Teaching 19:96-8 Spr'71.

2. Desbiens, Germain and Jean Falardeau. Encadrement, surveillance, droits et devoirs des élèves. R Information 16:5:7-9 jan'77.

3. Markey, T.L. Malice in Wonderland: the linguist's future in the German Department. German Quarterly 50:1:10-20 Jan'77.

Suggests a tripartite division of instructional duties in college language departments: (1) language instruction on intermediate and advanced levels, (2) tutorial instruction, and (3) interdisciplinary courses to curtail compartmentalization and encourage cultural comparison. Linguist and literary scholar need not be at odds.

4. Ramsey, L. Increasing effective pupil-teacher contact time. Edmonton: Edmonton Public School Board, 1976.

Report of the third year of operation of a three year Educational Opportunities Fund project designed to increase pupil-teacher contact time through the assignment of non-professional duties to volunteer aides and to use the increase in pupil-teacher contact time to individualized instruction.

*5. Robbins, Melvyn P. Noon-hour supervision: voluntary or compulsory? Educ Can 16:3:24-31 Feb'76. Reprinted in Sask Bul 43:10:6 Jan 28'77.

Examines the implications of a Canadian Supreme Court decision obligating teachers to provide noon-hour supervision of hallways, playgrounds, and lunchrooms. Discusses the events that led to the decision and the various issues that were directly or vicariously considered by the courts.

*6. Robbins, M.P. Noon hour supervision voluntary or obligatory? the Supreme Court decides. Ont Ed 7:20-3 Nov-Dec'75. Also in Orbit 6:3-6 Dec'75 and Catholic Trust 16:1:20-6 Mr'76.

Rejecting the assertion that certain out-of-classroom supervisory functions are voluntary, the Supreme Court of Canada has unanimously decided that the teachers in Winnipeg have an implied contractual obligation to provide noon-hour supervision of hallways, playgrounds and lunchrooms.

7. Rousseau, Dominic A. The assignment and misassignment of secondary school teachers in Alberta. Ph.D. thesis, University of Alberta, 1970.

8. Sanders, Lawrence. Are you overstaffed? Independent School Bul 35:4:35-6 My'76.

While there is no formula for statistically analyzing the amount of payroll waste inherent in a school's staff, savings will develop if the administration as a whole takes time to ask careful questions about the use of time and goals to be accomplished.

C. Class Size and Pupil-Teacher Ratio

*1. ATA survey indicates high student-teacher ratio. ATA News 9:1 Oct 15'74.

A survey of urban and suburban school districts conducted by the Alberta Teachers' Association reveals that the majority of classes have over 25 students. In all eight districts surveyed, the average class size figure turned out to be significantly higher than the pupil-teacher ratio.

2. Abel, Harold. Teacher education -- the controllers of the process. Ed'l Sciences -- An Intern'l J 2:117-18 Feb'68.

3. Aimoné, Louise. York-PTR. Ont. Ed. 6:8-9 My-Je'74.

Points out the difference between PTR and class size. Suggests alternative ways of dealing with the need for smaller classes without increasing education costs.

4. Alderman, J. Hard-pressed staffs juggle ratios, hope for the best. Col Mgt 6:22-5 Dec'71.

5. Anderson, Gary J. and Herbert J. Walberg. Class size and the social environment of learning: A mixed replication and extension. New York: American Ed'l Research Association, 1971. 19 p. ED 047 975. Not available ERIC.

Fourteen dimensions of the social climate of learning of high school classes were examined in their relationships to the size of the classes concerned. Two data samples included in the study were 149 classes participating in the 1967 evaluation of the Harvard Project Physics course and 61 classes in the Montreal Metropolitan area in a variety of subject content areas. Eight of the hypotheses supported by the Harvard data were again supported in the Montreal sample, though only two of the replications reached statistical significance. Cohesiveness and difficulty were negatively correlated with class size; that is, small classes are perceived as more difficult and more cohesive. These two statistically significant replications, as well as the six non-significant replications, were examined in their relationship to a number of paradigms for study of the effects of increasing class size on the social climate composition of the group. The study suggests a number of implications for replication work in general, as well as some specific findings relating to the climate of high school classes. Not available due to marginal legibility of original document.

*6. Anstruther, Bob. York-PTR. The real issue was: who runs schools? Ont. Ed. 6:10-11 My-Je'74.

Discusses the 1974 York County strike and the decision of the Minister of Education to let PTR become a negotiable item.

*7. Armstrong, Alex. So you think class size is a priority item? Ed'l Courier 46:26-27 24 Oct'75.

Describes results of an OPSMTF survey of educators and trustees in five boards of education in Ontario. Survey indicated that smaller class size was the number one priority for both classroom teachers and trustees.

8. Arnett, E. Class size makes the difference. Man Teach 52:12 Oct'73.

*9. Arnett, E. Let's tackle style and size. Man Teach 52:3 Dec'73.

The General Secretary of the Manitoba Teachers' Society reviews the results of the Olson study, "Indicators of Quality". On the basis of the findings of the study, he proposes that all those involved in education make a common effort to improve the style of educational activity and pupil-teacher ratio.

**10. Bartelt, Claudia and Phyllis Williams. Relationship of class size and various cognitive variables to academic achievement. Paper presented to the California Ed'l Research Association meeting. San Diego, 1971. 9 p. Available ERIC. ED 055 591.

Professional concern about the possible injurious effects of large classes and personal interest in various cognitive style variables led to this particular research at West Valley College (California). One of the major points these findings suggested was that what a student says he prefers in terms of tests and type of class may have nothing to do with his performance within these areas. Preference appeared to be independent of performance. It may be important, however, to allow teachers to pick the class size they feel most comfortable with.

11. Beckett, A.C. Selection and recruitment of business teachers. Bsns Ed Forum 25:20-2 Dec'70.

*12. Bolander, Steven F. Class size and levels of student motivation. J. Exp. Ed. 42:12-7 Wtr'73.

The purpose of this study is to determine the relationship between the motivation level of the

the student and his respective class size. Furthermore, if a relationship does exist, is this relationship reflected in the student's evaluation of the course's effectiveness.

*13. Borovilos, John and Larry Mosnyk. Is more merrier? Forum 3:201 Oct'77.

Satisfactory research on class size and related problems requires attention first to a number of other basic problems. We need to know more about schools and how the learning process occurs. We need to develop better ways of assessing quality in education and different ways of organizing schools and classrooms. We also need an explanation of why learning occurs in schools.

*14. Borovilos, John and Larry Mosnyk. The mechanical teacher. Forum 3:197-200 Oct'77.

Only those class size studies reporting that decreasing class size makes no difference to the learning process receive any public exposure. Any studies showing something less conclusive (i.e., OISE study on Class Size) have been successfully ignored by the media. The authors encourage teachers to become familiar with and publicize studies which support their own experiences with small and large classes -- that class size does make a difference to quality teaching. Several existing studies are recommended.

15. British Columbia. Department of Education. Pupil-teacher ratio versus class size. Victoria: Educational Data Services, Division of Communications, 1975. 10 p.

16. British Columbia School Trustees Association. Class size and pupil-teacher ratio: an annotated bibliography. Vancouver: BCSTA, 1974.

*17. California Teachers Association. Class size in California school districts 1970-71. Burlingame: CARE, 1971. 41 p. Available also for years 1971-72 to 1975-76.

*18. Caress, C.W. Teacher recruitment. Clearing H 45:392-6 Mr'71.

*19. Ceilings and class size. Ed'l Courier 42:16-17 Apr'72.

Suggests that teachers indicate why they feel that smaller classes are desirable.

20. Cheatham, Richard and William Jordan. Cognitive and affective implications of class size in a lecture-practicum speech communication course. Improving College and University Teaching 24:4:251-4 Aut'76.

A study concerned with attitudes and achievement in a speech communication course is reported. Of three methods of instruction, the small class-individual instructor technique prompted more favorable student attitudes than did the 40- or 80-student lecture treatments.

21. Church, M. Children in large classes learn to read faster; conference of the United Kingdom reading association. Times Educ Sup 2932-5 Jy 30'71.

22. Class size and staffing. NJEA Rev 43:66 Sept'69.

23. Class size drop in BC. Ed Today 1:1 Je'75.

*24. Class size research still debatable. Ed BC 3:1 Sept'74.

This article charges that the Olson study, "Indicators of Quality", upon which B.C.'s drive for smaller classes is based, is just the latest in a long series of failures in research attempts to prove that reduced class size yields direct benefits to student achievement.

*25. Coleman, P. Pupil-teacher ratios and the use of research findings in educational policy-making. Winnipeg: Manitoba Assoc. of School Trustees, 1971. 12 p.

Points out the sources of controversy in the PTR debate and reviews some of the relevant research.

**26. Cook, John J. and Kenneth R. Blessing. Class size and teacher aides as factors in the achievement of the educable mentally retarded. Final report. Madison: Wisconsin State Dept. of Public Instruction, 1970. 326 p. Available ERIC. ED 047 484.

The purpose of the study was to determine the effects of class size and the use of teacher aides on pupil behavior and teacher behavior in educable-mentally handicapped classes at the primary and intermediate grade levels. In the course of the study 20 classes remained constant and 18 aides were employed throughout the project. Effects on pupil behavior were determined by contrasting the educational and linquistic achievement and social behaviors in the several

instructional arrangements. Researchers concluded that the major impact of the aides alone appeared to be a reduction in undesirable behavior in the classroom and an enhancement of the spelling achievement; class size alone had an effect on arithmetic and classroom behavior, with the standard classes gaining more in math and manifesting less negative behavior than the increased classes. It was generally felt that the most pronounced effects of the study appeared in the primary classes and suggested to the researchers that administrative strategies other than aides and class size should be developed to enhance the behavioral, linguistic functioning of intermediate educable mentally handicapped pupils.

*27. Cooperation and integrity key to reform. ED BC 3:1 Oct'74.

Learning is a complex phenomenon related to a mix of many factors. No adequate research exists that consistently gives supportable evidence of improved education due to reduction in class size or PTR. BCSTA believes that the long campaign waged by BCTF to reduce class size and PTR has resulted in inflated expectations of pupil progress when the recommended numbers have been achieved. BCSTA recommends that a variety of reform programs should be encouraged rather than having all available money invested into changing only one factor in the learning conditions of students.

**28. De Angelis, Joseph, Jr. The influence of class size on student performance in a secondary school science laboratory. Masters degree research project. Glenside, Pa.: Beaver College, 1977. 15 p. Available ERIC. ED 139 659.

Influence of class size on student performance was tested by comparing two homogeneously grouped sections of ninth grade students. Students were randomly assigned to two sections, one numbering 46, the other 23. Both sections were taught Introductory Physical Science (IPS) for a period of six months. Standardized test results could not be used to reject the null hypothesis that no significant differences existed between large and small classes in terms of achievement. Possible explanations and individual scientific research implications are discussed.

**29. Dunn, Lloyd M. and others. Teachers and group size as variables in stimulating oral language development with grade one disadvantaged children. Nashville: George Peabody College for Teachers, Tenn. Inst. on Mental Retardation and Intellectual Development, 1966. 21 p. Available ERIC. ED 105 473.

The purpose of this study was to evaluate both the relative effectiveness of different instructional personnel and the effect of differences in group size upon oral language acquisition for educationally disadvantaged first grade children.

Though small differences in progress were observed among groups receiving their instruction under various conditions, statistical analysis indicated that these differences could not be accounted for by either of the experimental variables. The results suggest that a well designed instructional program can be equally effective under a variety of conditions.

*30. Feeney, J.D., and A.L. Mohun. Special needs school research and development project. Preliminary Report. Toronto: Metropolitan Separate School Board, July 1973.

Class size and programme variables were manipulated in an attempt to ascertain effects on possible reading gains measured by Metropolitan Achievement Test in Grades 1, 2 and 3. Each child was given a WISC or WPPSI in the fall of 1972. The test will be given again in the Spring.

31. Flango, Victor E. The impact of collective negotiations on educational policies. Jrnl of Collective Negotiations in the Public Sector 5:2:133-55 1976.

Compares 17 financial and nonfinancial indicators of "educational quality" for states with and for states without laws permitting collective bargaining legislation. Of the 17 indicators, collective bargaining was found to have the most impact on the pupil-teacher ratio in elementary school.

*32. Flinker, Irving. Optimum class size: What is the magic number? Clearing House 46:471-3 Apr'72.

An experiment with large and small groups of students in mathematics and language arts.

*33. Gajewsky, Stan. Class size: review of the literature and selected annotated bibliography. Reports in Education No. 2. Montreal: Faculty of Education, 1973. 58 p. Available ERIC. ED 093 055.

This survey of the literature indicates that the problem of class size is not so much one of the type of subject or student, but more often a problem of teaching technique with different sizes of classes. Some authors maintain that class size in itself is not the important factor, but rather it is a factor which masks other more important variables. One set of arguments which does not yet seem to have been considered in the research literature is that class size is a basic working condition for teachers.

*34. Golden, M. Class size. Community Sch 5-7 Feb'73.

A short review of literature on class size shows that people with different sets of educational objectives or priorities tend to interpret the literature differently. Using the research as background, the author examines the staffing policy in the Metropolitan and Toronto areas.

*35. Grant, Claude W. Faculty allocation of effort and student course evaluation. J of Ed'l Res 64:405-10 My-Je'71.

36. Hall, W. Clayton and Norman E. Carroll. The effect of teachers' organizations on salaries and class size. Industrial & Labor Relations Review 26:834-841 Jan'73.

Teacher organizations may be accepting larger classes in return for higher salaries.

**37. Halpern, Jonathan. Bounds for new faculty positions in a budget plan. Berkeley: University of California, 1970. 10 p. Available ERIC. ED 045 009.

The University of California considers the faculty/student ratio a principal determinant of quality. Requests made by the University for new faculty positions are based on the student/faculty ratios proposed by the University in its 5-year program for each campus. Given the forecasts of student enrolments, these proposed ratios determine the required increase in faculty positions. What the ideal ratio is depends on the Regent's policy guidelines and these may change over the years. The difference between the University's request for new positions and the number approved by the state poses a difficult problem for the administration, and this paper addresses itself to that

problem. It formulates and solves a mathematical model used to calculate lower and upper bounds on the number of new faculty positions allocated, over a finite planning horizon, to a multicampus educational institution. In this model the student/faculty ratios must meet certain growth rate restrictions imposed by the faculty and the administration. The initial student/faculty ratios, forecasts of student enrolments, and certain critical ratios are assumed known and given.

38. Hart, M.C. Can polytechnics work to higher SSR's? Nat Assoc of Tchrs in Further and Higher Ed Jrnl 4:6-7 My'76.

39. Harvey, Thomas R. Staffing and organizational development. New Directions for Higher Ed. 3:49-59 Wtr'75.

Observing that conventional approaches to institutional solvency through staff reductions or alterations have not been very effective, the author advocates an organizational development approach to the student-faculty ratio dilemma. A systematic staff analysis plan is outlined and its advantages and disadvantages compared to the conventional approach.

40. Haslett, Betty J. Student knowledgeability, student sex, class size and class level: their interactions and influences on student ratings of instruction. Research in Higher Ed 5:1:39-65 1976.

In general, the more knowledgeable the student is in an area, the higher his ratings of courses and instructors in that area. Significant interactions among the four main effects were also found across the judgmental dimensions students utilized in evaluating instruction.

*41. Heim, John and Lewis Perl. The educational production function: implications for educational manpower policy. Ithaca, N.Y.: Institute of Public Employment, 1974. 38 p.

The authors attempt to determine what mix of educational resources will best assure higher student achievement. They direct their attention to the inputs which can be changed -- teacher characteristics (i.e., length of service, graduate training, verbal ability), class size, quality and quantity of school administrators and use of educational technology. This study finds that all inputs are not equally productive for all grade levels or all subject matter specialties.

42. Hendelman, Teena. Does class size make a difference? Rep. Class Research 5:5-6 Jan-Feb'76.

*43. Henderson, Vernon, Peter Mieszkowski and Yvon Sauvageau. L'influence du groupe sur les fonctions de production du système scolaire. Ottawa: Conseil économique du Canada, 1976. 88 p.

Ce livre contient les résultats d'une étude dans les écoles de Montréal. Les conclusions indiquent que la valeur numérique optimale de la classe se situe entre 30 et 40 élèves. Aussi, il y a un rapport entre la qualité des classes (c'est-a-dire la dimension de l'ecole, regroupement des élèves, formation des enseignants, etc.) et le rendrement des élèves.

*44. Henderson, Vernon, Peter Mieszkowski, and Yvon Sauvageau. Peer group effects and educational production functions. Ottawa: Economic Council of Canada, 1976. 78 p.

This book reports results of a study of Montreal schools. Conclusions offered are that optimum class size is 30-40 and that there is a correlation between pupil achievement and school characteristics (that is; size of school, class size, qualifications of teacher, etc.).

*45. Hickcox, Edward and Geoffrey Burston. The question of size. Education Canada 13:41-3 Sept'73.

Author tried to discover the best size for a school system, individual schools and individual classrooms.

46. Howlett, Douglas W. Class size: a mandatory bargainable issue? NOLPE School Law J 3:1-16 Feb'73.

Most state public bargaining statutes utilize industrial labor-law language in determining the subjects of bargaining between employers and employees, usually calling for discussion or mandatory bargaining over "terms and conditions of employment". However, the majority of these laws are silent on the exact meaning of this phrase. The question of class size is one of the issues within the "area of silence" in the state statutes. Discusses court cases relating to the issue.

*47. Hyer, Anna L. and Robert M. McClure. The effect of innovations on staffing patterns and teacher roles in Organisation for Economic Co-operation and Development. New patterns of teacher education and tasks; country experience: United States. Paris: OECD, 1974. 154 p. (p.67-122.)

The authors analyze the effects of three categories of innovations on staffing patterns and teacher roles: differentiated staffing, technology, dependent innovations and open learning plans. Among the conclusions drawn from the study were: (a) that reducing class size does not necessarily improve learning results; (b) that there are often less expensive ways of increasing educational effectiveness than by reducing pupil/teacher ratio.

*48. It takes more than a fairy godmother. Man. Tchr. 54:3 Mr'76.

Points out the need to lower the pupil-teacher ratio in Manitoba's elementary schools.

49. Johnson, W.F. Performance contracting with existing staff. Ed Tech 11:59-61 Ja'71.

50. Kandor, Joseph R. Class size: problems and issues. Catalyst for Change 2:6-7 Wtr'73.

Each local school district must decide for itself the class size which best permits attainment of the District's goals and objectives in educating all its students.

*51. Kolmes, Jo-Ann. A question of quality. ATA News 9:3:1 Oct 15'74.

An interview with Dr. M.N. Olson, designer of the "Indicators of Quality" survey -- a project aimed at determining the key elements involved in quality education and devising a method of measuring school performance in the key areas. The study concluded that one of the most important determinants of teacher-student behavior and of classroom processes was class size.

*52. Knott, Doug. Here on the sixth floor! OECTA Rev. 31:19-21 Mr'72.

Discusses the uneasiness felt by teachers regarding job security and the relationships of PTR and class size to this issue.

53. Laughlin, J. Stanley. A sacred cow -- class size. College and University 51:339-47 Spr'76.

A review of literature on class size, different instructional methods, and faculty load in

relationship to student outcomes concludes that research data does not substantiate that differing class sizes make a difference in student cognitive growth, thus must be justified on social bases or other variables. Includes suggestions for further research.

*54. Lindsey, Jim. A re-analysis of class size and achievement in the I.E.A. mathematics study. Comparative Ed. Rev. 18:314-26 Je'74.

This study provided the opportunity to examine the relationship of achievement in mathematics to class size and to the number of hours of mathematics instruction received each week.

55. Lindsey, J.K. and M. Cherkaoui. Some aspects of social class differences in achievement among 13-year-olds. Comparative Ed. 11:247-60 Oct'75.

This paper developed one possible set of hypotheses to explain academic achievement for a given class size and hours of instruction, in terms of the socialization function of the school.

56. Little, Alan and others. Do small classes help a pupil? New Society 18:769-771 Oct'71.

**57. Madison Public Schools. Effects of class size on reading achievement in Grades 1-3 in the Madison Metropolitan School District 1974-1976. Madison: 1976. 41 p. Available ERIC. ED 140 256

A study was conducted to determine the effects of class size on the reading achievement of 517 representative Madison (Wisconsin) students in a three year longitudinal sample. Data included reading achievement, IQ, attitudes toward reading, parents' and teachers' ratings of student interest in reading, sex, age, socioeconomic status, and average class sizes. Scores on the Sequential Tests of Educational Progress (STEP) at the end of the third grade were used as a criterion of final reading achievement. Among the results were the findings that class size is virtually nonpredictive of reading achievement; that only one of the 517 sampled students was enrolled in classes of 20 or fewer students for three consecutive years; and that, when "small" was defined as less than the median class size for each of the three years, there was a slight trend toward lower STEP scores in the small classes, reflecting IQ differences associated with the effects of the special education programs in Madison. Because of confounding with attendance

area and special education programs, it was not possible to determine if placing students in small classes, grades one to three, would have any effect on their reading achievement scores.

58. Mallinson, T.J. The vicious circle of class size and education style. Monday Morning 7:27 Ja'72.

59. May, R.C. Pupil-teacher ratio and class size: distinctly different statistics. Ed Today 2:9 Sept'75.

60. McCluskey, Lawrence, and Frank L. Smith Jr. The issue of class size. APSS Know How 27:1-4 Nov'75.

The second installment of a series discusses some of the research that has dealt with the variables of class size and educational process.

61. McGreal, T.L. and C. Hughes. Operating in the school job market. Clearing H 45:397-403 Mr'71.

**62. McKeachie, Wilbert J. Improving teaching effectiveness. Washington, D.C.: U.S. -- Office of Education, 1971. 27 p. Available ERIC. ED 054 083.

This PREP package attempts to provide answers to some basic questions on teaching. The topics considered are class size, lectures versus discussions, student versus instructor-centered teaching, student versus teacher-led discussions, print material and programmed learning, independent study, simulation, and student characteristics of intelligence, cognitive style, authoritarianism, sociability, affiliation, anxiety, and sex. The conclusions indicate that small classes are probably more effective than large, discussions more effective than lectures, and student-centered discussions more effective than instructor-centered discussions for the goals of retention, application, problem solving, attitude change, and motivation for further learning. There is also some evidence that different teaching methods work well for differing types of students. One implication of the findings is that there should be a variety of teaching methods used within a college, and teachers should develop a repertoire of skills. Students should be offered various options within a course to maximize their motivation and learning. There is also a bibliography of 254 items.

63. McKenna, Bernard H. Patterns of staff deployment related to school quality. IAR RES BULL 1:1-4 Apr'61.

64. McKenna, Bernard H. and James B. Pugh. Performance of pupils and teachers in small classes compared to large. IAR Res Bull 4:1-4 Feb'64.

*65. McKenna, Bernard H. and Martin N. Olson. Class size revisited. Today's Education 64:29-31 Mr-Apr '75.

Nine generalizations are made about what takes place in smaller elementary and secondary school classes (those with 25 students or less). The generalizations are based on findings from nearly 60 studies.

**66. Meredith, Vana H. and others. South Carolina first grade pilot project 1975-76: the effects of class size on reading and mathematics achievement. Columbia: South Carolina State Dept. of Education, 1977. 96 p. Available ERIC. ED 135 072.

This study was intended mainly to examine the effects of class size on the reading and mathematics achievement of first graders and also to determine the effects of teacher inservice training on student achievement. Results indicated that the overall achievement of first-grade students in small classes was substantially greater than overall achievement of students in large classes. However, neither teacher inservice training nor the interaction of class size and inservice training had any significant effect on overall achievement.

**67. Millard, Joseph E. Small classes? What research says about effective class sizes and possible alternatives to small classes. Ankeny, Iowa: Heartland Education Agency, 1977. 14 p. Available ERIC. ED 133 897.

Research findings identifying the most effective class size are found to be inconclusive. Some studies have found small classes more effective, others have favored large classes, and some have found no differences in learning effectiveness due to class size. A number of these studies are cited and points of agreement noted. In a second section alternative organizational schemes are described that might be suitable for school systems faced with declining enrolments.

68. Miriam, David. Size and education -- a chimerical relationship? Universities Quarterly 31:1:73-108 Wtr 76/77.

The relationship between size and effectiveness of educational unit is examined from two viewpoints: how size has been used in political controversies over educational organization, and research evidence on the effects of different sizes of unit. It is suggested that size has not been used independently of historical or social context to explain educational effectiveness.

69. Moody, William B. The effect of class size on the learning of mathematics: a parametric study with fourth-grade students. J for Res in Mathematics Ed 4:170-176 My'73.

A 30-minute lesson on exponents was taught to 249 fourth graders assigned randomly to groups of 1, 2, 5 or 23. Students in the smaller groups had better attainment of ten objectives than did those in the group of 23. Individual instruction was better than instruction in groups of five.

70. Moon, Rexford G. Beating the high cost of low ratios. College Board Rev 80:30-2 Sum'71.

71. Moore, Dennis R. and others. Lessons from Europe: a report on European preschools and child care. Childhood Educ 53:2:66-70 Nov-Dec 76.

Reports on European preschools and child care arrangements considering particularly teacher-child ratios, school entry and amount of playground space available.

72. Moorehead, C. DES claims reduction in class sizes. Times Educ Sup 2919:3 Apr 30'71.

73. Murphy, William F. Class size and teacher load. Newton, Mass.: New England School Development Council, 1975. 69 p. ED 107 627. Not available ERIC.

Part 1 presents a summary list of true statements with respect to the central topic of this study. The statements are divided into three sections: (a) class size and pupil achievement, (b) class size and teaching procedures, and (c) teacher load. Each statement is accompanied by references to part 2, where support for the statement can be found. Part 2 contains an analysis of the research on (a) terms and definitions in this area, (b) findings with respect to class size and pupil achievement, (c) studies of class size and teaching processes, (d) teacher load and its relationship to instruction, and (e) the law and contractual precedents on this issue in the state of Connecticut.

**74. National Council of Teachers of English. Workload for English teachers: policy and procedures. Urbana: NCTE, 1973. 36 p. Available ERIC. ED 079 748.

Policy states that the teacher of English in a secondary school should have direct instructional responsibility for no more than 100 students. Chapters include a discussion of the background on English teacher workload and a discussion of "the factor tree", a device for deciding on an optimum workload for English teachers.

*75. National Education Association. Class size. Washington, D.C.: NEA, 1977. 32 p.

This document is designed for use by state and local teacher association personnel and others who serve in a variety of association activities. It contains a combination of hard research findings, philosophical considerations, organizational arrangements and procedural imperatives as they relate to teacher association interests particularly and to the quality of educational programs generally.

**76. National Education Association. The question of class size. Washington, D.C.: NEA. 23 p. Available ERIC. ED 133 325.

Generalizations about educational quality drawn from over sixty class size studies, and supported by their data, show that with a small class size: (1) teachers provide a wider variety of instructional methods and learning activities; (2) students benefit from more individualized instruction; (3) students engage in more creative and divergent thinking processes; (4) students learn to function more effectively as group members and leaders; (5) students develop better human relations skills; (6) students learn basic skills better and master more subject matter content; (7) classroom management and discipline are better; (8) teacher attitude and morale are more positive; and (9) student attitudes and perceptions are more positive. Seventy-two documents are cited in the list of references on class size and educational effectiveness.

*77. National Education Association. Research Division. Pupil-staff ratios, 1970-71. NEA Res Bull 49:113-17 Dec'71.

78. National School Boards Association. Three reviews of contemporary research literature: class size, open plan schools, flexible-modular scheduling. Washington, D.C.: NSBA, 1973. 21 p. ED 135 079. Not available ERIC.

These reviews of contemporary research literature on class size, open plan schools, and flexible-modular scheduling may suggest to educators and educational policy-makers that changes in the use of space and the use of student and teacher time may be more effective than reducing class size.

*79. New England School Development Council. Class size and teacher load. Newton: NESDC, 1975. 63 p. ED 107 627. Not available ERIC.

This review of research on class size is organized into two parts. Part 1 presents a summary list of true statements on the central topic. The statements are divided into three sections: (a) class size and pupil achievement, (b) class size and teaching procedures, and (c) teacher load. Part 2 contains an analysis of the research on (a) terms and definitions, (b) findings with respect to class size and achievement, (c) studies of class size and teaching processes, and (d) the law and contractual precedents on this issue in the State of Connecticut.

80. New look at pupil-teacher ratio. Rep Class Research 3:no.3:7-8 '74.

**81. New York City Board of Education. The impact of the 1975-1977 UFT -- Board of Education contract on class size, maximum pupil-teacher ratios and the 1975-1976 allocation formula. Brooklyn: 1975. 96 p. Available ERIC. ED 136 409.

This paper presents the revised 1975-76 allocation of funds for instructional services and capital note items. The revisions were necessary because of the impact of the 1975-77 agreement between the city board of education and the American Federation of Teachers local on obligatory teacher staffing patterns (such as minimum pupil-teacher ratios required to hold class sizes below contractual limits). A key feature of the agreement is the requirement that teachers employed in Title 1 schools waive two preparation periods. Although this modification will result in more effective use of teachers, it will not obviate the drastic cutbacks in services that must be made as a result of reductions in the amount of money budgeted to instructional services. Numerous charts are included.

**82. New York State. Div. of the Budget. Survey of use of student-faculty ratios for budgeting purposes in higher education. Albany, 1975. 17 p. Available ERIC. ED 112 727.

The overriding reason for this analysis centers on the widespread, but varied, application of student-faculty ratios (SFR) as a contributing factor in determining the faculty budgeting requirements of public and private institutions.

Of particular concern at this time is the appropriateness of using the ratio data for budgeting purposes in a period of stabilized, and in the near future, declining enrolments. Accordingly, the study identifies alternatives to use of SFR in the budget process.

83. Norton, David L. Does God have a Ph.D.? School Rev 80:67-74 Nov'71.

84. O'Connor, Margaret. The nursery school environment. Developmental Psychology 11:556-561 Sept'75.

> Observations of social and dependency behaviour were made on 48 children in two nursery schools. The findings indicate that in settings with higher teacher/child ratios, children interact significantly more with adults and less with peers.

*85. O'Driscoll, Bill. Viewpoint. NTA J 63:6-7,23 Spr'72.

> Presents the case for reducing class sizes in Newfoundland.

86. Olson, Lynn. Patterns for change. Grade Teacher 89:46 Nov'71.

*87. Olson, Martin N. Classroom variables that predict school system quality. IAR Res Bull 11:1-8 Nov'70.

88. Olson, Martin N. Identifying quality in school classrooms: some problems and some answers. MSSC Exchange 29, Special issue, Ja'71.

*89. Olson, Martin N. Ways to achieve quality in school classrooms: some definite answers. Research Notes. Phi Delta Kappan 53:63-5 Sept'71.

*90. Olson provides ammunition for smaller classes. BCTF Newsl 13:1:1 1973.

> Many teachers feel that the Olson study "Indicators of Quality" gives a scientific basis for what many teachers have believed all along and gives ammunition for a case presentation on class size.

*91. The optimum question: is there an optimum class size? Sch. Progress 42:27 Feb'73.

> Attempts to show that the question of class size is a complex one that should not be dealt with in isolation from such variables as desired quality of education, subject being taught, teacher attitude, total number of professional staff members working with students, and method of instruction.

**92. Overall, Jesse U. and others. Class size and students' ratings of instruction: a clarification of relationship. Paper presented at the annual meeting of the American Educational Research Association, 1977. New York: 1977. 25 p. Available ERIC. ED 138 175.

The relationship between class size and students' evaluations was examined in two experiments conducted at a public and a private university. Results indicated that the relationship between course enrolment and students' evaluations -- with the exception of the quality of Group Interaction factor score -- tended to be small, with both very small and very large classes being rated more highly than classes in between. The initial decline in students' evaluations, as course enrolment increased, was not considered large enough to warrant separate norm groups based on the first experiment. In the second experiment, the magnitude of the relationship was sufficient for the Group Interaction factor to make enrolment important in interpreting the student ratings.

*93. Paikin, Carole. A look at class size. Ed'l Courier 45:13-15 Feb'75.

Discusses the optimum class size survey to be undertaken by the Metro Toronto Board of Education.

**94. Phillips, James A. Class size effect on community college economic education. Cypress: Cypress College (Calif.), 1971. 8 p. Available ERIC. ED 053 713.

This document discusses the author's solution to students' demands for smaller, more individual classes vs. administrative pressure, forced by enrolment and financial demands, for larger classes. In the 1970 fall semester at Cypress College (California) 150 students participated in an experiment in which an economics 1A class size was increased from 50 to approximately 100, but also included small seminars of 10 students each. It was found that a significant difference did exist between control and experimental groups on the basis of pre-test/post-test score gains and on semester score averages. The experimental group had a higher absence and withdrawal rate, yet scored higher; it also exhibited a more positive attitude response to course experiences. It is felt that the small seminar contact was largely responsible for the significant learning gain.

*95. Pidgeon, D. Class size as a factor of pupil performance -- a policy analysis in Organisation for Economic Co-operation and Development. New patterns of teacher education and tasks -- general analyses. Paris: OECD, 1974. 118 p. (p. 88-118).

This study attempts to resolve the apparent conflict which exists between most teachers' views about the need to reduce class size to increase efficiency and the results of much research which has demonstrated that student achievement is either not related to class size, or is higher with larger classes. It is argued that a need for smaller classes is largely dependent upon the policy adopted by an education system. If more traditional methods of group instruction are to be pursued very little will be gained by reducing classes below 30-40. However, if the system decides that learning is more important than teaching and that methods involving a greater interaction between pupil and teacher are necessary, a considerable reduction in class size would seem inevitable.

96. Proud, Don. The staffing ratio in the secondary school. Forum 19:27-29 Aut'76.

97. Québec. Conseil supérieur de l'éducation. Les conventions collectives des enseignants dans l'ensemble des commissions scolaires. Québec, 12 dec'74. 55 p.

*98. Une question de qualité. Nouvelles AEFNB 6:7+ 1 dec'74.

Une traduction d'un article dans le "ATA News", suite à une conférence prononcée par le Professeur M.N. Olson à l'intention des enseignants de l'Alberta. Le Professeur Olson est l'auteur d'une importante recherche sur les conditions d'un enseignement de qualité.

99. Roberts, Alvin. Establishing realistic case loads for rehabilitation teachers. New Outlook for the Blind 69:62-3, 85, 87 Feb'75.

*100. Rodekohr, Mark, and Carol Rodekohr. A study of the effects of enrolment decline. Phi Delta Kappan 57:621-623 My'76.

Districts with declining enrolments spent about $200 more per student than the growing districts, had about three fewer students per teacher, averaged about $500 less in average teacher salaries, had a lower dropout rate, and had higher achievement scores.

*101. Ryan, Doris W. and T. Barr Greenfield. Clarifying the class size question. Toronto: OISE for Ontario Ministry of Education, 1976. 229 p.

Report of a seminar held to discuss various approaches to research on the effects of class size.

*102. Ryan, Doris W. and T. Barr Greenfield. The class size question. Toronto: OISE for Ontario Ministry of Education, 1975. 342 p.

Reports on investigation of the kinds of research on class size which should be undertaken in Ontario. Includes a critical review of previous class size research. Indicates the opinions of various groups of Ontario educators as to the type of research that should be done.

*103. Ryan, Doris W. and T. Barr Greenfield. Research and the class size question. Ont. Council for Leadership in Ed'l Admin. 6:11-14 Ja'76.

Outlines the kind of research that must be done before the best class size can be determined.

**104. Sadler, Ronald A. and C.T.K. Ching. Determinants of educational quality in Nevada. Reno: Nevada University Agricultural Experiment Station, 1974. 29 p. Available ERIC. ED 137 034.

The composite American College Test (ACT) scores of 7,928 Nevada students were used as a measure of district educational quality to investigate the relationships between educational quality and various factors hypothesized to have an effect upon quality. Specifically, the relationships between educational quality and district wealth, teacher training, rural-urban characteristics of school districts, instruction costs per student, and student-teacher ratios were investigated. Major findings were: a significant positive relationship between educational quality and amount of teacher training; differences in the educational quality of rural, urban, and remote school district (rural schools had higher levels of educational quality than either urban or remote school districts); positive relationship between educational quality and the amount of money expended per student on classroom instruction; a negative relationship between educational quality and high student-teacher ratios. It was concluded that ACT scores do not measure all aspects of educational quality.

**105. Sadler, Ronald A. and C.T.K. Ching. Optimal school location in rural Nevada. Reno: Nevada Univ. Agricultural Experiment Station, 1975. 18 p. Available ERIC. ED 137 035.

In order to investigate the interaction of cost, quality, and efficiency in the provision of educational services in rural Nevada, synthetic cost functions were developed using a linear programming transportation model to identify optimal school district organization. It was found that by increasing the student-teacher ratio from 20:1 to 30:1, operating costs would be reduced by 17% and that transportation costs would have to increase by over 200% before they became a critical factor in the definition of optimal district organization. Changing the assumed bussing mileage limits did have a significant effect on the location and size of schools in the region. The versatility of the linear programming transportation model was demonstrated in terms of its ability to provide comparisons for changes in program sizes, student-teacher ratios, permitted school locations patterns, bussing costs, and changes in permitted bussing distances by students.

106. Salvia, John A., and others. The effect of class size on the identification of potentially disturbed children. Exceptional Children 40:517-9 Apr'74.

107. Sawadsky, Walter and Susan Walz. Class size and pupil-teacher ratio: an annotated bibliography. Published by British Columbia School Trustees' Association, 1970. 13 p.

108. Schofield, Dee. Class size. Washington: National Assoc. of Elem. School Principals, 1974. 32 p. Available ERIC. ED 093 031

Outlines generally inconclusive nature of class size research. Summarizes effects of class size on the educational process and on student and teacher attitudes, as well as the economic effects of reducing class size.

109. Sedlacek, William E. Institutional characteristics associated with increases in medical school class size. Journal of Medical Educ 52:2:138-9 Feb'77.

Recent federal legislation has dealt directly with medical school class size. This study examines the relationship between increases in entering class size in American medical schools and changes in a variety of educational variables.

*110. Shack, Sybil and others. Teacher power. Mon Morn 5:9-13+ Sept-Oct'70.

111. Shapiro, Sylvia. Preschool ecology: a study of three environmental variables. Reading Improvement 12:236-41 Wtr'75.

Examines the effects of class size, physical space and activity centers on a variety of child and teacher behaviours in preschool classrooms.

*112. Shapiro, Sylvia. Some classroom ABC's: research takes a closer look. Elem. Sch J 75:436-441 Apr'75.

Reports results of a study of 274 4-year-olds in 17 half-day nursery classrooms, which examined: (1) the relationship between class size and individualization; (2) the influence of space on children's involvement in activities; and (3) the impact of various activity areas on children's and teacher's behaviour.

*113. Shapson, Stanley M. Optimum class size: a review of the literature. Toronto: Research Dept., Toronto Board of Education, 1972. 22 p. Available ERIC.

Stresses five factors affecting optimum class size: criteria of success, original class size, subject being taught, whether or not the teacher can exploit the potential of smaller classes by using an appropriate method of instruction, and the teachers' feelings and attitudes.

*114. Shaver, James P., and Dee Nuhn. The effectiveness of tutoring underachievers in reading and writing. J Ed Res 65:107-12 Nov'71.

In this study, the effectiveness of tutoring underachievers in reading and writing at the fourth, seventh and tenth grade levels was checked. At all the grade levels, tutored underachievers progressed more than those who were not tutored.

115. Siebel, Cynthia C. and others. Administration of design copying tests to large groups of children. Perceptual and Motor Skills 32:355-60 Apr'71.

116. Smith, Frank L. Jr., and Lawrence McCluskey. The class size/quality of educational process relationship. APSS Know How 27:1-4 Apr'76.

Discussions and research on class size would be more useful if they dealt with some of the significant

relationships that exist between a resource allocation plan (more teachers for smaller classes) and the social processes that constitute the environment of these smaller classes.

117. Smith, Frank L., and Lawrence McCluskey. The issue of class size. APSS Know How 26:1-8 Je'75.

A review of some of the class-size research and a discussion of the views of administrators and teachers.

118. Sommer, Robert, and Franklin D. Becker. Room density and user satisfaction. Environment and Behaviour 3:412-417 Dec'71.

Over a four-year period, different sized classes were asked to rate the physical environment in a college classroom. Class size was found to be related to the proportion of complaints, satisfaction with ventilation, and room size for both students and faculty. It is necessary to develop theories of people-in-environments rather than of people and environments as separate entities.

119. Sommers, Alexis N. University productivity. Educational Record 57:4:251-6 1977.

Academic communities are under intense pressures to balance expenditures with income. Strategies are offered here to increase productivity drawn from the experiences of the University of New Haven. Emphasis is on revenue-cost ratios, class size, and faculty teaching schedules as primary factors in productivity improvement.

120. Sproule, A. New front opened in oversize class war. Times Educ Sup 2925:3 Je 11'71.

121. Stemnock, Suzanne K. Guidelines for school staffing ratios. Arlington: Educational Research Service, 1974. 87 p. ED 140 459. Not available ERIC.

Since early in this century educators have been proposing staffing formulas they believe will facilitate educational quality. The resulting guidelines represent a wide range of recommendations -- from the possible to the utopian. School boards, teachers' groups, administrators, consultants, and taxpayers thus have a range of choices among the recommendations presented herein. In any situation, however, three factors will affect their choices of guidelines: the needs of the pupils, the availability of qualified personnel, and the funds available.

122. Stennett, R.G. Class size: confrontation or constructive compromise? Speech to Ontario Ed'l Res. Council Annual Conference, 1973. 15 p. Available ERIC. ED 087 099.

Argues that the tendency to sacrifice nonteaching personnel in order to keep class size down may hurt rather than help the cause of quality education.

123. Stennett, Richard G. and Lorna Isaacs. Some facts about class size: London secondary schools, fall 1973. London: Educational Research Services, London Board of Education, 1974. 44 p.

Provides detailed description of class sizes according to subject area, grade level, type of school and combinations of these variables.

124. Stennett, Richard G. and Lorna Isaacs. Some facts about class size: London elementary schools, September 1972, January 1973 and September 1973. London: Educational Research Services, London Board of Education, 1974. 6 p.

Describes shifts in class size during the period covered.

125. Stewart, David. Class size and workload in American college and university English departments. ADE Bulletin 45:1-8 My'75.

Presents the results of a survey conducted to determine the teacher workload in institutions of higher education, concluding that over one-third of the English teachers teach too many students or too many courses or both.

*126. Thompson, Beverley J. A true life story about P.T.R. Forum 3:15-18 Feb'77.

Describes the effect on the secondary schools of Waterloo County, Ontario, of an increase in PTR of 0.22. Includes the effect on class size, availability of courses, support services and assignment of teachers.

127. Tougher line sought on oversize classes. Times Educ Sup 2938:7 Sept 10'71.

*128. Trew, Marsha. Analysis shows serious flaws in class size research. Alta. Sch. Trust. 44:5-8 Dec'74.

Criticizes the Columbia University studies of class size and BCTF use of these studies in their class size campaign.

**129. Trudeau, Elaine and Roger Nye. Legal requirements for class sizes and caseloads for special education services. Arlington, Va.: State-Federal Information Clearinghouse for Exceptional Children, 1973. 51 p. Available ERIC. ED 081 123.

Presents state-by-state analysis of legal requirements for class sizes and caseloads for special education services as of June 1, 1973. Classes for deaf and blind children generally have the lowest maximum enrolment, while classes for educable mentally retarded generally have the highest. Caseloads for speech therapists average 60, for teachers of visually handicapped about 20.

*130. Vincent, W. and M. Olson. Measurement of school quality and its determiners. New York: Teachers College, Columbia University, 1972.

Parts I and II deal mainly with "Indicators of Quality", a school process evaluation devised by W. Vincent. Part III contains descriptions of two alternative methods of school appraisal, the "Index of Pupil Gain" and the "Quality Inventory". Part IV presents a discussion and description of the theoretical construct which served to delineate areas for school quality analysis and clarify the interactive processes of the educational milieu.

131. Vincent, William S. and others. The question of class size. IAR Res Bull 1:1-4 Oct'60.

132. Walberg, Herbert J. Class size and the social environment of learning. Human Relations 22:465-75 Oct'69.

*133. Walberg, Herbert J., and Pinzur, Sue. Public school effectiveness and equality: new evidence and its implications. Phi Delta Kappan 56:3-9 Sept'74.

Since 1966, support of public schools has been damaged by widely accepted hypotheses built by Coleman, Jencks and others on inadequate samples and faulty measurements. Results presented in this article are from a study relating Selective Service test scores to census data, other social indicators and educational resource measures. Data are for complete populations or strict random samples. Results indicate that high pupil/teacher ratios and low rates of per pupil expenditures in the public schools are associated with high rates of failure on the test.

134. War on oversized classes. Times Educ Sup 2917:8 Apr 16'71.

135. Ward, William H. Jr. A test of the association of class size to students' attitudes toward science. J Res Sci Tchg 13:137-143 Mr'76.

> Studied a group of high school biology, chemistry and physics classes; concluded that there was no relationship between scientific attitudes and class size, but there was a significant improvement in achievement in smaller groups.

136. Weis, Lynn, and others. The effects of various teacher contact ratios in programmed reading. Improving Human Performance 4:23-36 Spr'75.

*137. Whitworth, Fred E. A critique of "Peer Group Efforts (sic) and Educational Production Functions", Economic Council of Canada. Ottawa: Can. Sch. Trustees Assoc., 1977. 16 p.

> Reviews the Henderson-Sauvageau book. Indicates limitations in the study, such as the basing of findings on K-3 only. Discusses various factors that need to be taken into account in establishing appropriate class sizes.

*138. Whitworth, F.E. Teacher-pupil ratios. Regina: Sask. Sch. Trustees Assoc., 1971. 15 p.

> Provides historical perspective on the class size question. Provides statistical data on enrolments in the Prairie Provinces.

*139. Wielenga, Gordon. Task force gathers data on class size. Manitoba Tchr. 55:8 Mr'77.

> Describes an MTS report on class sizes in Manitoba schools.

*140. Williams, Mary-Jo, and Edward Holdaway. Class size -- a continual concern. ATA Mag 58:18-21 Nov'77.

> Discusses various approaches to the assessment of class size effects. Points out inadequacies in research concerning class size. Concludes that definitive research is not yet available.

*141. Wright, Edgar N. Effects of class size in the junior grades. Toronto: Ontario Ministry of Education, 1977. 130 p.

> This study attempted to investigate experimentally the differences between 4 class sizes which ranged

from the size of many special education classes to the largest sized regular classroom found in Toronto schools. Varying class size produced few changes in classroom functioning. A large significant difference observed was in the frequency with which pupils were addressed by teachers as individuals, which increased as class size was reduced below 30. Other differences included an increase in mathematics concepts scores in classes of 16, an increase in pupils' verbal participation in classes of 16 to 23, more frequent descriptions of classes of 16 to 23 as quiet, and some evidence that reading was taught more often in classes of 16 than in other classes.

142. Yeany, Russell, Jr. A study of the correlation between elementary student teachers' selection of science teaching strategies and average class ability and size. J Res Sci Tchg 13:249-252 My'76.

D. Hours of Work

*1. Corse, D.J. Edmonton teaching load clause proves working conditions are negotiable. Sch Prog 40:46-7 Mr'70.

The clause in the newly negotiated Edmonton Public School Board agreement represents a different approach to the preparation time concept. The basis of the clause is that scheduling should apply only to those activities that involve other people. If the teacher is not scheduled for duties that involve colleagues, students or parents, the teacher decides what to do with the time available.

2. Dillon, Roy D. An analysis of selected factors influencing use of time by forty vocational agricultural instructors in Nebraska. Journal of the Amer. Assoc. of Teacher Educators in Agriculture 18:1:9-16 Mr'77.

Data from a 1-year survey of 40 vocational agriculture teachers in Nebraska are presented in narrative analyses and in six tables showing man hours worked: (1) By 27 duty categories, (2) based on student enrolment in vocational agriculture programs, (3) based on number of students in FFA, (4) according to conduct of young farmer classes, (5) according to conduct of adult classes, and (6) based on use of an advisory committee.

3. Dillon, Roy D. Teacher time -- factors related to its use. Agricultural Educ 49:5:110-111 Nov'76.

Reports results of a survey of 40 Nebraska vocational agriculture teachers on time they spent in one year in 27 duty categories. Data is analyzed by age groups, educational levels, marital status, and other factors.

4. Dillon, Roy D. Teaching and leadership influence use of time. Agricultural Education 49:7:164-165 Jan'77.

Forty Nebraska vocational agriculture teachers recorded the use of their time for one year. The time was recorded in 27 duty categories. Comparisons were made to determine whether selected factors made a difference in how agriculture teachers used their time. This article gives details of this study.

**5. Educational institutions; a study of the economic effects of the $1.30 minimum wage and 40 hours maximum workweek standards under the Fair Labour Standards Act. Economics effects studies. Washington, D.C.: Wage and Labour Standards Administration, 1970. 88 p. Available ERIC. ED 052 304.

The 1966 amendments to the Fair Labour Standards Act extended enterprise coverage to all public and private educational institutions. Nonsupervisory employment in educational institutions rose by 3 percent between October 1968 and March 1969, while average hours worked per week declined slightly. Wage adjustments during the period were limited almost entirely to raising the wages of those below the minimum. The average weekly wage bill increase was 0.6 percent, compared to a 1 percent weekly increase required to raise wages to the minimum of $1.45, which became effective on February 1, 1970.

6. Hilsum, S. The teacher at work. Slough, Eng.: NFER Publ. Co., 1972.

A condensed version of The teacher's day. (See following entry.)

*7. Hilsum, Sid and B. Cane. The teacher's day. Slough Eng.: NFER Publ. Co., 1971. 312 p.

By observing and recording teachers' activities in junior schools, the authors attempt to provide an objective description of the work day and week of elementary teachers both in and out of school.

8. Hilsum, Sid and C. Strong. The secondary teacher's day. Windsor, Berks.: NFER Publ. Co., 1977.

The chief aim of this project sponsored by the National Foundation for Educational Research in England and Wales was to provide an objective description of the work of secondary school teachers, in and out of school, throughout the year. The study includes observation and classification of teacher activities, as well as records kept by the teachers in the sample. Results indicate that secondary teachers work nearly $8\frac{1}{2}$ hours per day and $42\frac{1}{4}$ hours per 5-day week. Including weekend work, the average term-time working week is $46\frac{3}{4}$ hours.

9. Hornsby-Smith, M.P. The working life of the university lecturer. Universities Quarterly 28:2:149-164 Spr'74.

Reports on the findings of a time budget of a university lecturer for 12 months and challenges the assumption that faculty work only 50.5 hours a week. Increasing bureaucratization of staff-student relationships has reduced the time available for faculty reading and research.

**10. Kester, Donald L. How many hours per week are full-time community college counselors expected to work? Evidence indicates that in California no uniform load exists. Berkeley: University of California, 1971. 7 p. Available ERIC. ED 047 686.

The purpose of this study was to discover the workload policy for full-time counselors at each California community college and to compare them to see what variability existed. The response rate to questionnaires sent to all California community colleges was 79 per cent. Workloads were found to range from 15 to 40 hours per week. It is believed that the load policy of counselors is affected by power politics, as it is much more variable for counselors than for instructors. There is an indication that the present variance will diminish over time. Some pressure toward a more uniform load policy is the result of counselors seeing themselves and their profession as distinct, and seeing value in cooperative efforts designed to preserve and enhance their status.

**11. Munson, Ann. Released time for faculty: practices and procedures in selected community colleges. Rockville, Md.: Montgomery College, Office of Institutional Research, 1973. 51 p. Available ERIC. ED 086 302.

A survey was conducted of all the community colleges in Maryland, Mount Vernon College in Washington, D.C., and

N. Virginia Community College. Practices concerning the following types of released time were investigated: department or division chairman; curriculum development; curriculum coordinator; faculty senate; chairman, faculty or college senate; chairman, standing committees; coaching; summer advising; teaching first semester; excess number of students in a section; extra load over 15 hours; honors program; and special projects. Other factors related to released time were also surveyed: who determines who gets released time; number of faculty eligible for released time in one semester; written policies and procedures for released time; staff or supporting services.

12. Simpson, W. Hunter and others. The 4-40 workweek: two views. Manpower 4:15-19 Ja'72.

E. Sources of Stress and Teacher Morale

*1. Adams, David W. Tired and frustrated teachers. Today's Education. 64:37, 40-1 Jan-Feb'75.

The causes of teachers' frustrations and weariness are discussed. Five suggestions are given that might promote better professional efforts among teachers.

*2. Anderson, H.G. You'd better stop and think it over. ATA Mag 56:20-1 Sept-Oct'75.

A teacher who resigned in mid-term urges others to try to overcome rather than give in to mid-term feelings of disillusionment.

*3. Baker, Eva L. Reinforcers for teacher behavior reported in cued and uncued situations. J of Teacher Ed 22:205-9 Sum'71.

Teachers' responses to question: "what could your school district do for you to convince you to adopt a new, more difficult, but presumably more effective teaching procedure?" included reduction in class size, more money, clerical help, and released time.

4. Bishop, Thomas Shelley. Factors affecting job satisfaction and job disatisfaction among Iowa public school teachers. Ph.D. thesis, University of Iowa, 1969. DA 3661-A.

*5. Bjarnason, C. Edutopia -- the great hangup. Man Teach 51:7 Mr'73.

Over the years, the public school system has assumed a responsibility for reshaping society far beyond its modest tasks of a few decades ago, despite the fact that it lacks the resources, time, knowledge, influence and personnel to perform such a job. Little wonder that more teachers and principals confess disillusionment and the educational system is often seen with a jaundiced eye by parents, students and the general public.

6. Blomerley, Peter. The junior college department and academic governance. Junior College J 41:38-40 Feb'71.

The chairman and faculty from four departments in each of eight public 2-year colleges in New York State were surveyed to determine: (1) the status of the department in the organizational structure; (2) the relative influence of the chairman and his colleagues in the department; and (3) the relationship between degree of faculty influence and both faculty morale and departmental objectives.

7. Brayne, Robin. Teacher job satisfaction: a semantic differential study of selected variables in the job situation. M.Ed. thesis, University of Manitoba, 1971. 100 p.

A study to determine which of a set of selected variables of the job situation was judged by Manitoba teachers, urban and rural, to be most closely associated with job satisfaction.

8. Brooks, James Bryan. An analysis of community college faculty morale and selected factors. Ann Arbor: University Microfilms, 1970. 108 p. ED 049 722. Not available ERIC.

This study investigated the morale of 84.5 per cent of 223 randomly selected North Carolina Community College faculty. The study's objectives were to: (1) determine whether differences in morale existed when faculty members were grouped according to type of faculty position (vocational, technical, college transfer), sex, age, total number of years teaching experience, total number of years at present institution, educational level, and teaching load; and (2) determine whether community college faculty members differed on self-concept scores when grouped according to selected factors.

*9. Butefish, William L. Do you know why your teachers are leaving? School Management 15:16-20 My'71.

The exit interview and other methods are suggested for ascertaining why teachers are leaving their positions.

10. Check, John F. Dissatisfaction in teaching. Ed'l Forum 35:173-5 Ja'71.

**11. Coughlan, Robert J. and Ernest C. Froemel. A comparison between two standardized measures of teacher morale. New York: American Ed'l Research Association, 1971. 14 p. Available ERIC. ED 050 170.

The Purdue Teacher Opinionaire (PTO) and the School Survey (SS) were studied to determine their comparative effectiveness in measuring similar aspects of teacher morale. Elementary and secondary school teachers from Wisconsin middle-class school district completed both instruments. Analysis of the data revealed six significant canonical correlations relating the two scales. Four of these variates proved to be interpretable: supportive relations, pay and benefits, work load, and facilities and equipment. Each variate is discussed and the elements are presented in individual tables. The study indicates that teacher morale can be predicted from a number of factors common to both instruments.

*12. Davison, Ronald G. Work satisfaction and teacher mobility. Clearing House 45:265-72 Ja'71.

This investigation found no clear relationship between teacher mobility and job satisfaction. It would appear that teachers dissatisfied with their present levels of job satisfaction find other means to reduce their discomfort. This study surveyed secondary teachers in their second year of service.

13. Discipline not only threat to mental health, speakers say. Man Teach 53:11 Apr'75.

14. Dunglison, R.G.C. Occupational values and teacher morale. M.A. thesis, University of Calgary, 1973. 106 p.

This study relates the occupational values of teachers and principals to teacher morale.

15. Dunham, Jack. The effects of disruptive behaviour on teachers. Ed Rev 29:181-187 Je'77.

*16. Few teachers see shrink. OPSMTF News Mr'77. p.2.

Reports on study conducted by Instructor which indicated that about 35 per cent of the 7,000 teachers surveyed sometimes called in sick because of fatigue or nervous strain. Seven per cent said that they had received psychiatric treatment.

17. Foucher, Roland et autres. Questionnaire portant sur la satisfaction au travail des enseignants (es). Québec: Institut national de la recherche scientifique -- Education, 1974. 20 p.

Le questionnaire de satisfaction couvre les aspects suivants: la tâche d'enseignant, le salaire, la gestion du collège, les relations entre les professeurs d'un département, l'autonomie professionnelle, la promotion professionnelle, la charge de travail, les relations de travail, la sécurité d'emploi, et les moyens d'enseignement.

**18. French, John R., Jr. and others. Job demands and worker health. Symposium. Paper presented at the annual meeting of the American Psychological Association, 1976. Washington: 1976. 44 p. Available ERIC. ED 138 859.

Seventeen years ago a group of researchers at the University of Michigan became interested in the possibility that occupational health may be determined by psychological as well as physical hazards in the work environment. This symposium reports on current work in testing a unified theory of the effects of psychosocial stresses on mental and physical health. This document is divided into four sections: (1) Job Demands and Worker Health; Introduction; (2) Occupational Differences in Job Demands and Strain; (3) Job Stress as Person-Environment Misfit; and (4) Effects of Social Support on Occupational Stresses and Strains.

19. Gregorc, Anthony F. Satisfaction from teaching. Ed'l Forum 35:307-13 Mr'71.

20. Greiff, Barrie S. To what degree is work performance related to occupational stress. Occupational Mental Health 2:4:11 Wtr'73.

Whether there is a direct, significant correlation between occupational stress and work performance remains to be further investigated.

*21. Groves, Cy. The graying of the teaching profession. ATA Mag 55:8-12 Nov-Dec'74.

Author indicates that for the past two decades "teachers have been beset by devils who have gradually tightened the pressure valves that control teaching and learning conditions". He notes that every innovation in education has a price that must be paid in terms of a teacher's time and energy. Suggests that morale is becoming so dangerously low that the teachers' organizations must act vigorously to ensure the survival of the teaching profession.

**22. Helwig, Carl. An analysis of the relationship of the degree of satisfaction of teachers within certain Ohio schools with the formal communication of their principal. Parts I and II. Final report. Akron: University of Akron, 1969. 234 p. Available ERIC. ED 047 427.

This study tested two hypotheses: (1) that the frequency of oral and written communications between a principal and his teachers was related to teacher morale, and (2) that the communication frequency was related to school organizational climate. The sample consisted of 37 Ohio elementary school principals and 310 teachers. Principals kept 20-day records on types of formal communications as the variable of frequency of principal-teacher communications. Teachers completed a scale measuring faculty perception of the school organizational climate. No significant correlation was discovered between total principal-teacher communications and teacher morale.

*23. Hrynyk, N.P. Trust and teacher morale. ATA Mag 55:39-40 Nov-Dec'74.

The failure to recognize the increasingly harassing conditions under which teachers work, the refusal to trust teachers as professionals and the failure to establish effective means for teacher influence in educational policy are some of the factors contributing to the declining morale of Alberta teachers. Alberta school boards must establish policies which will overtly demonstrate that they regard teachers highly and that they are prepared to trust them with all the tasks in education.

**24. Hunter, Madeline. Counter irritants to teaching. Paper presented to the annual meeting of the American Association of School Administrators, 1977. Las Vegas: 1977. 10 p. Available ERIC. ED 137 962.

Air traffic control, surgery, and teaching are probably three of the most potentially stressful occupations in the world. Stress can be benign and growth-producing or malignant and destructive, depending on three primary factors: (1) the possession of coping behaviors which are effective and for which there is feedback as to the degree of their effectiveness; (2) the predictability of the stressful situation, and (3) the duration or repetition of the stressful circumstances. There are two categories of stress escape devices that serve as effective "counter irritants" to teaching. One group of counter irritants consists of activities that make demands or stimulate creative endeavor in a completely different field. A second group of counter irritants consists of activities that require only participation. An effective prescription for a balanced program of counter irritants to teaching should include systematic exploration of both demanding and relaxing activities in physical, social, intellectual, and emotional areas.

25. Hurlbert, Earl L. Conflict management in schools. Ph.D. thesis, University of Alberta, 1973. 184 p.

The purpose of the study was to investigate the management of interpersonal conflict between teachers in schools.

26. Husted, Kathryn. In defense of defiance. New Voices in Ed 1:17-18 Sum'71.

27. Karolat, Harry G. Job satisfaction of teachers in the comprehensive schools of Saskatchewan. M.Ed. thesis, University of Alberta, 1971. 88 p.

Compares job satisfaction of academic and non-academic teachers.

28. Kazanas, H.C. and Tom G. Gregor. Relationships of the meaning of work, value of work, job satisfaction, and selected demographic variables of vocational and non-vocational teachers. J Industrial Teacher Ed 12:12-20 Spr'75.

The authors found that teachers perceive a significant relationship between job satisfaction and the value of

work, but there was no significant difference between vocational and non-vocational teachers. In terms of demographic variables, community size and teacher income were significantly related to the meaning of work and job satisfaction, respectively.

29. Kyriacou, C.A. and J. Sutcliffe. Teacher stress -- a review. Educ Rev 29:4 1977.

30. Kytle, Ray. Slaves, serfs, or colleagues -- who shall teach college composition? College Compos & Communication 22:339-41 Dec'71.

Author feels that "the profession does not respect college composition because it does not respect the people who teach it", and offers recommendations for upgrading the faculty teaching composition.

*31. Ledgerwood, D. Teacher freedom: reality or illusion? ATA Mag 54:18-19 My-Je'74.

Changes are coming at today's teachers so fast they cannot possibly cope with all the alternatives. Many teachers are at a point of frustration and will only be free when they have a limited number of clear cut alternatives from which to choose.

32. Lessinger, Leon M. Teachers in an age of accountability. Instructor 80:19-20 Je-Jy'71.

**33. Letchworth, George A. Morale and teacher separation and retention in Bureau of Indian Affairs Schools. Washington, D.C.: U.S. Office of Education, 1971. 32 p. Available ERIC. ED 047 857.

Morale may vary along a continuum ranging from dissatisfaction and decline in performance to a point where the individual severs the employee relationship. The present study investigated those factors that differentiate between first-year teachers who remain for a second year and those who resign after 1 year of employment with the Bureau of Indian Affairs Schools. The underlying theoretical model was of a cultural-role and dissonance variety. Those individuals who had the most incongruency in areas related to their work environments were the most likely to terminate employment. Termination of employment was also related to dominant career patterns.

**34. Light, Richard U. Trustees and the faculty -- the Ruml Report revisited. Presentation at the Annual Meeting of the Association of American Colleges. San Francisco: 1973. 21 p. Available ERIC. ED 077 308.

In the early 1950's, economist Beardsley Ruml recommended that colleges and universities bring faculty salaries into comparable categories with other professionals by increasing the student-faculty ratio to twenty to one. Such a suggestion was greeted with enthusiasm from trustees and many administrators, but faculty were totally against the proposal from the outset. The vast enrolment growth in higher education of the late 1950's and 1960's enabled college and university professors to demand higher salaries without having to increase their workloads. Now, however, dwindling enrolments, especially in private colleges and universities, are causing trustees to reconsider Ruml's plan in spite of opposition from the faculty.

35. Madron, Thomas W. and others. Departmental morale as a function of the perceived performance of department heads. Research in Higher Ed 5:1:83-94 1976.

Some of the factors underlying differing levels of morale in university departments are analyzed since morale is seen as a potential symptomatic attribute that can be used in diagnosing organizational difficulties.

36. Maher, J.R. and D.T. Piersol. Perceived clarity of individual job objectives and of group mission as correlates of organizational morale. J Comm 20:125-33 Je'70.

*37. Manitoba Teachers' Society. Report of task force on declining enrollments. Winnipeg: MTS, 1977. 54 p.

Pages 11-15 discuss the impacts of declining enrollments on teacher morale.

38. Margolis, Bruce K. and William H. Kroes. Occupational stress and strain. Occupational Mental Health 2:4:4-6 Wtr'73.

At least five dimensions of job-related strain can and should be measured in order to appreciate the effects of job stress upon the worker.

*39. Marion, G., et C. Dufour. Rapport synthèse sur la satisfaction des enseignants du secondaire au Québec au terme de l'année 1967-1968. Québec: Corporation des Enseignants du Québec, 1970. 70 p.

Le plus important élément de satisfaction au travail

pour l'enseignant du secondaire, c'est la possibilité d'avancement. Sa satisfaction résulte ensuite principalement de l'attitude de ses supérieurs envers lui et de son statute professionel social. Loin derrière d'autres facteurs viennent la question du traitement et celle des relations avec les étudiants. Entre autres constatations, la recherche révèle aussi que les femmes enseignant au secondaire sont à tous points de vue plus satisfaites que les hommes de leurs conditions de travail.

40. Mattox, Keith E. Why teachers quit. Agricultural Education Magazine 47:6:141-3 Dec'74.

Stress factors, if not corrected, may lead to certain psychological reactions and may influence the teacher to find another occupation with a lesser degree of stress.

*41. McCaffrey, J. OSSTF campaign: the reinstatement of the unacceptable. Community Sch 4:4-6 Nov-Dec'73.

A Scarborough teacher accuses OSSTF executives and negotiators of betraying teachers in recommending the acceptance of a contract which contains an unacceptably low salary increase and defeat on the issue of lowering PTR.

*42. McConaghy, T.W. Teaching in the U.K.: a bleak profession. ATA Mag 55:16-18 Nov-Dec'74.

Desperately low morale among teachers in Britain threatens the structure of the education system.

*43. McConaghy, T.W. Teaching is a lonely job. ATA Mag 55:6 Nov-Dec'74.

In order to provide quality teaching, teachers must be freed of the frustrations of red tape, lack of supplies, and insufficient time to think, study and prepare.

*44. Media say teacher morale low in Calgary. ATA News 12:6:1+ Nov 30'77.

Several issues are causing frustration and concern among Calgary's teachers: (1) the literacy issue and back-to-basics debate portrays teachers as responsible for declining standards, (2) lack of support for teachers and administrators in their attempts to discipline unruly students undermines teacher confidence and (3) budgetary and curriculum decision constraints are frustrating efforts to further individualization and continuous progress programs.

45. Mendoza, Charlotte. Teacher motivation: overcoming the challenge from within. New Voices in Ed 1:23-4 Spr'71.

46. Miskel, Cecil and others. A test of the inequity theory for job satisfaction using educators' attitudes toward work motivation and work incentives. Ed'l Admin. Q 11:38-54 Wtr'75.

> The purposes of this study were to build a theoretical model for job satisfaction and to test its predictive efficacy using six educator groups. The posited inequity relationships were directionally supported but the beta weights and the explained variances were low.

*47. NEA. Research Division. Major problems of teachers. NEA Res Bul 49:103-8 Dec'71.

> An NEA survey of teacher opinion in 1971 found that 25% of teachers chose the following as major problems: large classes, insufficient time for rest or preparation, lack of public support for schools, inadequate salary and insufficient clerical help.

**48. Nicholson, Everett W., and Charles D. Robinson. Methods of achieving racially balanced faculties: their relationships to teacher morale. New York: American Ed'l Research Association, 1971. 13 p. Available ERIC. ED 048 661.

> This paper comments on a study undertaken to ascertain if personnel practices used to achieve faculty integration under court order affected teacher morale. The Indianapolis Public Schools categorized teachers as (1) those reassigned to another teaching faculty, (2) those already under contract who volunteered to be transferred, and (3) teachers hired from outside the school district who were assigned to faculties for the purpose of achieving racial balance. Teacher morale in each group was measured and analyzed. The resulting data findings reveal that new teachers hired to achieve racial balance scored the lowest irrespective of race, and that black teachers scored higher than their white counterparts.

*49. Noble, M. "Twilight zone". NTA J 64:8-9 Spr'73.

> The author suggests that lowering the pupil-teacher ratio would make a significant difference to the achievement and outlook of the pupils on the borderline of education -- the 30% classed as slow learners or problem children.

*50. O'Neill, L. Dynamique de l'enseignant. R ACELF 2:no.3:2-5 oct'73.

L'auteur analyse les caractéristiques actuelles de la situation des enseignants face à la société, a l'administration, a leurs élèves et à eux-mêmes.

51. Paton, J.M. Crisis of confidence in the teaching profession. Teacher Ed 8:56-66 Spr'76.

*52. Pratt, John W. Perceived stress among teachers; an examination of some individual and environmental factors and their relationship to reported stress. M.A. thesis, University of Sheffield, 1976. 83 p. and appendices.

Results of this study showed that the main sources of stress were staff relationships, disobedient children, agressive children, a general inability to cope with teaching problems and concern for children's learning. Other findings included a positive relationship between financial deprivation in the homes of children taught and incidence of stress among teachers. Among teachers of the more deprived children stress increased with the age of children taught. There was a positive association between the amount of stress recorded and illness. Perceived stress was greater among teachers scoring highly on the neuroticism scale of the Eysenck Personality Inventory. Stress from the teaching environment was significantly associated with changes in the teacher's personal and domestic life.

*53. Price, Jo-Ann. An instrument for measuring student teacher morale. J of Ed'l Measurement 8:47-8 Spr'71.

The Purdue Teacher Opinionaire is a 100-item standardized instrument devised to measure 10 dimensions of teacher morale. An item pool consisting of these items plus 56 additional items designed to measure 14 factors thought to be specifically applicable to student teachers, was submitted to a jury of experts for review. On the basis of the experts' judgments, an experimental instrument of 150 items was constructed.

54. Price, Jo-Ann, and Harrison Gardner. A follow-up on a morale measuring instrument. College Student Jrnl 6:1:56-8 Feb'72.

The authors recommend that as a result of this study, the Purdue Student Teacher Opinionaire be used as a tool to measure satisfaction or morale of student teachers and that such information be made available to those faculty members who are involved in student teacher preparation and supervision.

*55. Pym, Bridget and John Pratt. Reports of an exploratory attempt to identify and reduce problems connected with feelings of stress among a group of middle school teachers. Unpublished paper, 1977. Sheffield, England. 12 p.

Previous research had shown that teachers' experiences of stress in primary schools relate to both the age and the home background of the children taught. The authors carried out some counter-stress activity in a middle school of 8-12 year olds in a socially deprived area of a large industrial city.

**56. The remuneration of young teachers and of staff in colleges and departments of education and the effect on recruitment and wastage from the profession. London (England): Economist Intelligence Unit Ltd., 1970. 99 p. Available ERIC. ED 051 075.

This analysis of remuneration in the teaching profession in England indicates that the salaries of teachers with some years' experience are very low compared with professions needing somewhat lower academic qualifications. The career prospects for non-graduate teachers are also extremely poor. The salaries of staff in colleges of education are much lower than those of comparable groups in the public and private sectors, such as civil service or local authority positions, and banking, accountancy, sales, and personnel. Tables showing teachers' salary scales and comparisons with other professions are included. Results show that teaching possesses most of the attributes of a career attractive to both boys and girls, but the poor salary image is an important reason for only 10 percent of the boys thinking of entering teaching, as opposed to 51 percent of the girls. Case studies of men aged 25-35 indicate that salary considerations and limited career prospects are an important cause of wastage from the profession. Both non-graduate and graduate groups feel that no recognition is given to skill and devotion, in contrast to academic qualifications, and they believe that promotion involves taking administrative posts. Other major causes of dissatisfaction are unsatisfactory conditions within the schools, including narrow or irrelevant curriculum, petty restrictions, excessive power of principals, and lack of support with disciplinary problems.

57. Ring, Donald G. Who influences teachers in a division organization? Illinois Sch Res 7:7-13 Feb'70.

58. Rothnie, Ronald C. Teacher satisfaction as related to teacher perception of principal's consideration and initiating structure level. M.A. thesis, University of Victoria, 1973.

59. Sommers, Norman Lewis. The principal's influence upon teacher morale. Ph.D. thesis, Kent State University, 1969.

*60. Stevenson, George S., and Harry Milo. Ten tips to reduce teacher tension. Today's Education 64:52-4 Mr-Apr'75.

Ten suggestions are given that will help teachers and others cope with their daily frustrations.

*61. Stewart, Helen. Rusted and wrecked after five years; a few personal reflections on the road to informality and individualism. Lighthouse 3:1:10-12 Wtr'75/76.

Size of classes and lack of preparation time are ample deterrents for any teacher embarking on the road to individualized teaching.

62. Styles, Ken and Gray Cavanagh. Stress in teaching and how to handle it. Engl Jrnl 66:1:76-79 Ja'77.

**63. Thompson, John A., and John D. Williams. An analysis and evaluation of islands of differentiated staffing in Grand Forks public schools, Grand Forks, North Dakota. Grand Forks: North Dakota University, 1970. 44 p. Available ERIC. ED 055 356.

Critics argue against differentiated staffing on the bases that (1) limited compensation ranges lower teacher morale, (2) the loss of services of trained teachers and the impersonality of the large group organization lower student incentive to achieve, and (3) salary savings are at the expense of the quality of the instructional program. Since most of the literature on the subject deals only in simple, logical theoretical discussion, this study attempted to answer critics through a practical implementation of the concept to ascertain if differentiated staffing could achieve school district dollar cost saving without a significant negative change in teacher morale and/or without a significant reduction in student achievement. Fifteen differentiated staff teams collaborated in one school district, and a group of traditional teachers functioned as the control unit. The dollar difference was computed to be less than 1 percent of the total cost; none of the schools reported a lower teacher morale during the first year of the team operation; and, in terms of cognitive growth,

those students team-taught remained at least on a par with their control groups.

*64. Thoresen, Carl E. and Thomas J. Coates. Teacher anxiety: a review with recommendations. Review of Educ Res 46:2:159-84 Spr'76.

Explores the following issues regarding the cause and effect of teacher anxiety: the incidence of anxiety among classroom teachers; the cause and source of their anxiety; the effect this anxiety has on teacher and student behavior; and the methods used to reduce anxiety. Recommendations are also made for future study.

*65. Tribe, Verna. Scapegoats, teachers, culprits and other things to kick. Ed Courier 46:7:8-11 My-Je'76.

As the most numerous and most visible members of the education complex, teachers are the ones who take the brunt of the blame for decisions made by departments of education, school boards, directors of education and superintendents. Teachers are expected to implement, justify and explain these decisions of others to the community.

*66. Vetter, Eric W. Role pressure and the school principal. NASSP Bul 60:403:11-23 Nov'76.

Principals occupy apex positions, and like all high level executives, they are subject to fierce pressures and stresses. Discusses the nature of the role situation and presents a strategy that may help principals cope with the rising demands of the job.

*67. Williams, Paul. Stress -- surveys show how staff are suffering more than most. The Tchr 29:25:3 Dec 17'76.

Two research studies have revealed that teachers suffer from more stress than people in most other comparable occupations. An unexpected finding was the relationship between level of stress and the financial situation in the home background of pupils. Teacher stress increased with the age of children in schools providing a high proportion of free school meals.

*68. Wood, D.F. Fears of public school teachers. BC Teach 53:170-2 Feb'74.

A teacher in Vancouver's New School says teachers in the public school system are hamstrung by administrators and curriculum guides, and are afraid not only of both of these, but of students as well.

BIBLIOGRAPHIES IN EDUCATION SERIES

NO.	DATE	SUBJECT AND ERIC NUMBER	STATUS	ADDENDA
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4	Nov. 1969	Computer Uses in Instructional Programs ED 034 728		
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